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### The Beattie-Smith Lectures.<sup>1</sup>

(UNIVERSITY OF MELBOURNE.)

#### PSYCHIATRY: PAST, PRESENT AND FUTURE.

By W. ERNEST JONES, C.M.G.,  
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#### LECTURE II: THE PRESENT POSITION AND FUTURE OF PSYCHIATRY.

Is insanity on the increase? If so, how and why? These are questions constantly being raised; they are answerable only by rather vague generalizations. If one has regard only to the increasing

<sup>1</sup> Delivered at Melbourne on November 24 and December 1, 1938.

number of institutions and to the figures compiled by the Government statisticians, the answer to the first question would be "yes"; but then there are to be taken into account the growth of population in most nations, and, what is more important still, altered social conditions, modern legislation, and a progressive medical point of view. It is therefore possible that these increases are apparent rather than real, and that the answer to the whole question becomes more than ever dependent on one's own view and experience.

In our British communities one finds that there is today approximately one person certified insane to every 250 of the population (recent statistics from the United States of America and Ireland give a rather higher ratio); but this return by no means includes all neuropathic and psychopathic individuals, uncertified persons or those whose mental disorder is of congenital origin, chronic

inebriates, epileptics and delinquents, for whose care some recognized authority should be responsible.

In a period of some thirty years, at the end of the last century and the beginning of this, certified or recorded insanity increased in an alarming manner. In a paper I presented to the Australasian Medical Congress (British Medical Association) in 1913, I advanced the following figures:

In England and Wales, between 1879 and 1913, the certified insane increased from 69,885 to 138,377.

In Ireland, between 1871 and 1911, the numbers rose from 16,505 to 28,437.

In New South Wales, between 1877 and 1912, the increase was from 1,695 to 6,470.

In Germany, from 1877 to 1907, there was a rise from 40,375 to 198,412.

In the United States of America, between 1890 and 1910, that is, a period of only twenty years, the numbers rose from 74,028 to 187,798.

The English "Blue Book" for 1936 divided its figures into 155,522 mental defectives and 46,419 congenital mental defectives.

At the first International Congress on Mental Hygiene a statistical return for the year 1929 was presented, coming from thirty-two countries. In it 1,472 mental hospitals were mentioned, the annual admission rate being 341,488 and the residual population 879,989 persons. This amazing return did not include all the institutions for the feeble-minded and for epileptics, or certain university clinics and clearing houses in Germany. Australia is credited with 21,584 patients with mental disorder and defect and 204 epileptics in this return, and annual admissions into its thirty-five institutions numbered 4,826; but we are more concerned with our own conditions, and unfortunately I cannot present our Victorian statistics in a more favourable light.

In 1905 there were 4,770 certified insane persons, that is, 1 in every 245 of the population. In 1936 there were 7,210, a ratio of 1 in 261; but there were also in various institutions 230 military mental patients, 115 under observation in receiving houses and 270 voluntary boarders. We eliminate from our calculations the military patients as being somewhat apart from our everyday civilization, and we are justified in disregarding as doubtful the receiving-house and voluntary patients; so that we are left with a total increase of 3,054, the accumulation of 32 years, approximately 95 annually, for whom additional accommodation has to be provided. This should be regarded as a statutory requirement appearing each year on the public works votes for the department; but my past experience goes to show that such provision is generally five years in arrears.

It is an interesting fact to note in our Australian States, that in the more recently settled, and where there is a preponderance of males, the ratios of insanity are lower, and that as the female population approximates or passes the male, the numbers of the certified insane increase. We may take it that the population becomes more civilized as it becomes more feminine and the average age

increases; and inasmuch as insanity is largely associated with the process of decay, the greater will be the number of those likely to develop evidences of mental deterioration.

It is a well-recognized fact that the average age of death is steadily rising, and this is exemplified by the large number of senile persons and dementa to be found in all benevolent asylums and mental hospitals. Fifteen *per centum* of the admissions to our State hospitals during the years 1933, 1934, 1935 and 1936 were directly attributable to old age.

We have, I fear, made but an unsatisfactory reply to the question put to us concerning increased numbers. Now we approach the how and the why, which are closely associated, and we are concerned with the causation of mental disorder and defects. The importance of heredity as the great predisposing factor, of environment and social factors, of the influence of infections and disorderly habits, will take precedence; for causations such as psychic shock and traumata are only of less importance when contrasted with an evil inheritance, venereal disease and alcoholic excess. Psychotic conditions arising in connexion with childbirth appear to be occurring in reduced numbers. Only 14 or 15 patients with such conditions have been admitted annually to the mental hospitals during the last few years. What the medical statistician terms moral causes of insanity, for example, domestic worries, adverse circumstances and anxiety states, account for only 5% or 6% of the admissions to the same hospitals each year. To the depressing effect of influenza a few cases of mental disorder may be attributed; but in all probability these belong to the predisposed in certainly the great majority of cases. We must, however, acknowledge the possibility that serious mental trouble might arise from toxic conditions and various organs are strongly suspect, such as tonsils, sinuses, gall-bladders, ovaries *et cetera*. This fact should afford opportunities for successful collaboration between the specialist and the psychiatrist.

#### Heredity.

The consideration of the inherited traits of our patient is one of our first duties, and an accurate family tree will prove to be of the greatest value. This was within the knowledge of the old-time family physician; but it is not always available to the consultant of today. It is only by persistent and skilful inquiry that one elicits the acknowledgement of the fact that there were or are psychopathic blood relations. The occurrence of cases of certified insanity in the family may not be so important as a history of inebriates, extreme eccentrics and cranks, epileptics, perverts, recluses, misers and spendthrifts, high-grade mentally deficient persons, and criminals; but the revelation of these important factors will not be elicited if the medical attendant is content merely to ask: "Are there any cases of insanity in the family?" This is the very simple question occurring in the statement of particulars that has to be presented on the admission of a



patient into any mental institution. This is information almost as important as a knowledge of the temperament and prepsychotic make-up and of the successes or failures of the patient under examination.

The annual report of the Victorian Lunacy Department is an excellent example of the fallacy of certain statistics. Rarely more than 12% of the persons admitted acknowledge an inheritance of mental abnormality, and sometimes the return is even as low as 7%; but when a medical officer embarks on the intensive study of a group of consecutive cases, an abnormal inheritance will be discovered in as many as 40%. Callender, in 1912, showed that in 155 consecutive cases at Royal Park there was unmistakable evidence of a psychopathic inheritance in 63.8%. It will serve no useful purpose to enumerate the investigations on this subject made by competent scientists; but it appears quite certain that a poison or even an environmental influence acting on one generation can produce definite effects in successive generations, and that an individual passing as entirely normal may be a carrier of some potential disability to one or more of his descendants. This occurs quite as often in psychic as in physical conditions. The psychiatrist is concerned in these problems equally with the eugenicist; and inasmuch as the practice of medicine is so largely dysgenic, it becomes of the greatest importance that the laws of heredity should have some practical application when one is questioned as to the suitability of intending candidates for matrimony.

Unfortunately our knowledge and appreciation of these laws are inadequate. Even the Mendelian theory seems to be inapplicable to human beings; and we sadly require more accurate guiding principles than we possess today.

#### Syphilis.

As a result of its devitalizing action on the germ plasm, the influence of syphilis on the central nervous system has been put beyond all doubt by the experiences and investigations that have been going on for over a century, not only on the infected individual himself, but also on his descendants. Mott contended that the syphilitic virus was responsible for many forms of congenital deficiency; and Lind, in a long series of *post mortem* examinations, found evidences of syphilis in 50% of the grosser cases of idiocy and imbecility, particularly those associated with epilepsy.

So far as the psychiatrist is concerned, general paralysis of the insane has presented a problem of the gravest import; for in the first quarter of this century a diagnosis of general paralysis of the insane practically meant the signing of a death certificate in two or three years from the onset of symptoms. I propose to discuss this problem from my own point of view. When I assumed office in Victoria, in 1905, I was struck by the comparatively few cases of general paralysis of the insane

in the hospitals, and the small number of admissions, contrasted with my English experience. Undoubtedly some had been missed, as I found in the Idiot Cottages some juvenile patients with this disease whose illness had not been recognized as such on their admission. In my first two years of office the admissions due to general paralysis of the insane were only 16 and 24; but from that time onwards the numbers increased year by year, reaching, in 1913, a maximum of 88. Two years previously routine examination of the blood by the Wassermann test, and in the general hospitals and venereal clinics treatment by "Salvarsan" ("606") and allied drugs came into general use. It was only a few years after this that I noticed that the number of parietic patients admitted was diminishing; in 1926 there were only 36 admissions due to this disease. In that year treatment by malarial injection was introduced and the admission rate has kept down to that level or even less; there were only 26 admissions in 1932. There were 76 deaths in 1915 and only 11 in 1930. I thought then, and still believe, that we were justified in taking the number of admissions due to general paralysis of the insane as an index of the number of freshly occurring infections in the community. In that case we should be entitled to take an optimistic view concerning the mitigation and even the ultimate obliteration of this far-reaching evil.

In 1935 I met in England Colonel Harrison, the eminent syphilologist, who agreed with my view and stated his conviction that there was a definite diminution and that the very severe cases that one saw forty to fifty years ago were rarely seen today. Dr. Featonby, of the State Public Health Department, has supplied me with a return of the work of the State Venereal Diseases Clinic. This shows a diminution of one half in the numbers attending the clinic from 1917 to 1937; it also shows that the numbers treated for acquired syphilis have fallen from 2,414, in 1917, to 344, in 1937.

In Victoria, in the year 1926, the malarial treatment of general paralysis of the insane, initiated in Vienna by Wagner-Jauregg, was commenced. It was first employed at Sunbury by Dr. R. S. Ellery, acting under the medical superintendent, Dr. J. K. Adey; but it was used later and more extensively at Mont Park, where, under Dr. J. Catarinich, this valuable work was carried on by Dr. Ellery, Dr. C. R. D. Brothers and Dr. C. Farran-Ridge. It is still carried on as a matter of ordinary routine by the medical staff of that hospital. A return I had from Dr. Brothers in 1934 showed that, out of 348 patients, 75 were discharged "recovered" and 77 "relieved". Since then, in 1935 and 1936, there have been 21 further recoveries. Doubtless several of these patients have relapsed; but one must have regard to the fact that before the introduction of this treatment nearly all of these patients, if not all, would have suffered a lingering death. One should also mention the usefulness of the drug "Tryparsamide" in connexion with the treatment

of these patients; but I have had no personal experience of the use of the inductotherm, which in New South Wales has often been used successfully instead of malarial therapy. Having regard to these results, one is justified, I believe, in taking an optimistic view of this field of psychiatric endeavour.

#### Alcoholism.

Now on the question of alcohol. No matter how careful one's statements may be on this "yes-no" question, they are almost certain to be misconstrued. It appears quite impossible to get some people to acknowledge that there is any difference between the use and abuse of almost any such commodity as this. But I am strong in my opinion that this generation is much more sober than its predecessors. Any medical practitioner of long experience will tell you that he rarely, if ever, sees in private practice or in the refractory wards of general hospitals anything like the number or severity of cases of alcoholic abuse that he saw forty or fifty years ago. Our medical superintendents will tell you how few today are the good working patients that were recruited from the ranks of the chronic alcoholics in past years. In 1913 the State hospitals admitted 139 patients for whose mental illness intemperance was the causal factor; in 1933 there were 25; in 1934, 22; in 1935, 14 only; and in 1936 the numbers had gone up to 42. Let us take the figures for the Royal Melbourne Hospital in 1912. There were admitted 613 subjects of acute or chronic alcoholism and 253 patients with cirrhosis of the liver and kidneys. In 1933 the corresponding numbers were 48 and 143. In the first quinquennial period the number of cases in which alcohol played a part was 607, as against 186 in the last quinquennial period. Indeed, so temperate has Victoria become that the State Government last year decided to close the Inebriate Retreat at Lara, which had played a very useful part for thirty years in the reformation of the chronic drunkard.

Nevertheless I am very far from wishing to minimize the evil effects of excessive drinking. There are many instances on record in which children procreated during an alcoholic debauch have proved to be mentally defective or neurotic; and the mating of an alcoholic father with a feeble-minded woman is certain to produce defective children, although the children of alcoholic parents of otherwise normal mentality are more likely to be unnaturally precocious, their wits being sharpened by the exigencies of a precarious environment. The solution of this problem will be found in the more rigorous treatment of the individual offender, more particularly if he owns or drives a motor car, in rational administration of the licensing Acts and the pure foods Acts and in close control of grocers' licences. The physician rather than the psychiatrist will be ready to dogmatize on the evil effects of cocktails in association with cigarettes and aspirins, even though there may be some risk of confusing cause and effect. Nevertheless, it would appear that

the cocktail habit is a material factor in the prosperity of the beauty specialist. This reflection leads us now to consider environmental and social factors, which may conceivably play some part in the production of the mental condition euphemistically termed "a nervous breakdown".

#### Environmental Factors.

On my way out to Australia I heard of the condition "bush madness", the effect of solitude on those enduring isolated existences in the "Never-Never". One may have seen occasional cases; but in Victoria, our most settled State, one sees fewer instances than in the larger States. Furthermore, with the advent of the motor car, wireless and other facilities of transport, some alleviation of the disabilities of country life has come about, insufficient, however, to prevent the drift of population to the towns and to our larger cities, where the increased pace and complexities of our civil existence have introduced much more important factors in the production of the psychoneuroses. The Great War of 1914 to 1918 brought about other social changes—a new outlook on life in general, a tendency to say "sufficient unto the day is the evil thereof"; attendance at church is being replaced by a resort to the playing fields and the cinema; flat life is here our portion, hence a decrease in the size of families; the tin-opener obviates a sound knowledge of the culinary art; and we swallow our vitamins in tablets or capsules or mixed with some other kind of much-advertised magic.

Motor-car accidents are productive of very many fatalities at each week-end, and the number of fractured skulls, concussions and cases of shock is truly alarming; yet I have failed to discover any mental hospital returns showing an increased rate of insanity resulting from this source. Still, I anticipate that such will prove to be the case in the long run. We pray for peace rather than peace in our time; but I ask, shall we acquire a species of Oriental calm and fatalism when we are subjected to indiscriminate and ruthless bombings and poisons from the air? So far as our environment in Australia is concerned, we have everything in our favour—a good climate, ample breathing space, recreation and food supplies of the best, as well as liberal labour regulations and a high individual wealth rate; yet we have our ratio of defectives, degenerates and unemployables, too closely approximating those of older and less favoured countries. Fluctuations in our national prosperity have occurred from time to time—gold rushes and bountiful seasons on the one hand, bank crashes and droughts on the other. These may have contributed in some small degree to a high insanity rate; but they are a mere circumstance compared with the catastrophes in other parts of the world. Neurotic states are probably much more common today as a result of modern occupations; hysterical, obsessional and anxiety states are frequently to be found amongst telephonists, telegraphists, typists and



others engaged in monotonous work, which at the same time demands close and unremitting attention. It would appear that such disabilities occur twice as frequently among female workers and much more commonly among city dwellers. The great increase in the number of factory hands may have become necessary for reasons of employment and financial requirement; but it is questionable whether, from the eugenic standpoint, it is equally desirable. The factory hands I used to see forty years ago in England were of poor physique and often stunted and rachitic; but I am sure that our factory conditions today are infinitely better than those of which I had knowledge in England at that time.

In many instances anxiety states are based on some physical defect; but the urgency of the mental condition masks the latter, rendering treatment more difficult and calling for a psychotherapeutic approach. This is more particularly the case when the bodily condition is becoming of a chronic or incurable nature. These are the patients who pass over the borderline and become genuinely psychotic; they are more particularly predisposed individuals, or those who have been subject to a prolonged and monotonous experience, such as the nursing of an elderly and querulous parent, or who have gone through a nerve-shattering experience such as the Great War or other similar catastrophe. Periodical changes bring about stresses in our mental life; but the only one that I feel it necessary to discuss is that connected with our growing up.

#### Dementia Præcox.

This brings me to the question of *dementia præcox*, or to use the more modern term, schizophrenia. The comparatively unsuccessful treatment of this all too common psychosis I have for years regarded as a reproach to our specialty. At least 20% of the annual admissions to mental hospitals, not only in Victoria, but in all civilized communities, are classified under this heading; and, seeing that the great majority of patients are adolescents or comparatively youthful, a discharge rate of 20% to 25% seems quite inadequate, especially as relapses and subsequent readmissions are all too frequent. I take it that it has fallen to the lot of every practising physician to have several such patients brought to him—boys or girls, or at any rate young adults, just on the threshold of a bright and active life, who for no very obvious reason have become strange, sullen, off-hand, restless and untidy, generally quite irrational and introverted, yet with a history of even brilliance in their scholastic career, no longer ambitious unless it be with a perverted or ridiculous objective. Surely he has felt, "Here is a patient who must be restored", even though there may not have been an entirely impeccable family history. How often has one gone through the accepted forms of therapy—psychoanalysis, thyroid medication, sedative treatment, "Sulphosin", tonics *et cetera*, all of which have had their vogue—without any very satisfactory result, until

certification and institutional treatment have become a necessity, maybe too long delayed. However, during the last five or six years there have come to us, once more from Vienna, methods of treatment which, to speak quite conservatively, have at least doubled the chances of remission or even complete cure. You know, of course, that I am referring to the insulin treatment introduced by Sakel and to the "Cardiazol" treatment of von Meduna. It is unnecessary in such a paper as this to mention the complicated technique or to make an attempt to explain the rationale of either procedure, and to say that they are based on shock or convulsive therapy does not get one very far; but the fact remains that the subjection of a schizophrenic patient on a number of occasions to coma induced by the exhibition of doses of insulin, or to a number of epileptiform fits as a result of the intravenous injection of a drug called "Cardiazol", does succeed in quite a considerable number in altering their mental condition for the better. In some cases indeed the response is quite rapid and dramatic; in still more it is gradual; but it leads ultimately to a more or less perfect recovery.

I have not seen these remedies in operation elsewhere than in Australia, so I propose to limit my remarks to what I have seen here. The credit of the introduction of the insulin treatment here belongs to Dr. Farran-Ridge, who brought the subject to my notice shortly before I relinquished my position as director, and I am glad to think that our first cases, in his hands and with the assistance of Dr. Reynolds at Mont Park, were amazingly successful. Subsequently, in Western Australia, I watched the commencement of the insulin treatment at Claremont under Dr. E. J. T. Thompson and Dr. Thom, and of the "Cardiazol" procedure as well, although the latter was more extensively carried out by Dr. V. H. Webster at Heathcote. Such information as we had already in Australia of the latter treatment was greatly stimulated by Dr. Ellery's paper in THE MEDICAL JOURNAL OF AUSTRALIA, of October 2, 1937. Thanks to the medical officers of the Victorian Lunacy Department, I can give you fairly up-to-date returns. At Royal Park 91 patients have been treated; 72 left the hospital, but 19 relapsed, so that apparently 60% have materially benefited. There was but one death from heart failure. These were practically all insulin shock treatments; but in a few cases "Cardiazol" was used in conjunction. At Mont Park 73 patients were treated with insulin and 25 with "Cardiazol". The results were very similar. There were 23% to 24% of good recoveries and 32% to 33% of improvement; but the Mont Park cases were more chronic in character. Twenty of these patients had exhibited psychotic symptoms for over four years, and only six had been ill for less than six months.

At Heathcote, Dr. Webster treated 80 patients, of whom 34 had complete remissions and 26 were definitely improved; only five received no benefit whatever. He appears to have succeeded in some

cases of paraphrenia, with some manic-depressives and melancholics, and in some puerperal cases.

My own experience is comparatively limited; but in those suitable cases in which I have prescribed "Cardiazol", highly satisfactory results have followed. With some youthful patients the improvement has been almost dramatic, and no doubt further trials of these new methods will teach us which patients are suitable for one or the other remedy. But it is already obvious that careful selection is necessary, since treatment by insulin is not free from danger and demands trained and skilful nursing and constant attention by an experienced medical officer. At present one feels that those patients whose mental disorder has been apparent for three or four years are not likely to do well, and certain physical disabilities are contraindications. One has the idea that "Cardiazol" will be more suitable for schizophrenics of the hebephrenic and catatonic types, whilst the paranoiac patients will do better with insulin.

Associated with these remedies, psychotherapy and occupational therapy should be employed, a reeducational process or spring cleaning of mental cobwebs and fantasies. I think we should be careful not to be over-enthusiastic and not to promise too much in prescribing these, our newest remedies; and I feel that we should remember that our medical successes may in the end turn out to be eugenic disasters. One can but doubt the wisdom of recommending parenthood to any schizophrenic who has recovered. To some extent the older asylum officer may be justified in regarding treatments by malaria, insulin and "Cardiazol" as rediscoveries of the well-recognized fact that mental disorders may be altered for the better by some intercurrent bodily complaint. For example, we saw at Kew some thirty years ago, a few patients recover and several more materially improve as a result of an epidemic of typhoid fever; and it is well known that a disorder such as a severe carbuncle may bring about alleviation of mental symptoms, even amounting to a complete recovery. Nevertheless we cannot but admit that these modern treatments are pointing the road to further endeavour and to prospects of a brighter future for psychiatry.

#### The Value of Psychiatry.

Having due regard to the instructions in Beattie-Smith's bequest, I wish to make the chief objective of my lecture tonight the better teaching and knowledge of psychology, with the end in view of helping a clearer understanding of the problems of psychiatry and an increase in the teaching of this subject to students and practitioners in medicine.

Although many definitions of insanity have been brought forward, no experienced medical witness will be quite comfortable if he is required by a cross-questioning counsel to attempt to define it. I should prefer to leave that to the lawyers, who are adept at hair-splitting argument and love a delusion. Nevertheless, for the purpose of this

lecture I propose to explain what I understand by certain terms that I have been using.

Psychology I regard as the study of mind and behaviour, and by psychiatry I mean the study of the mind in disorder. Charles Mercier's definition of insanity as "disorder of conduct" only partially fills the bill, inasmuch as a man may behave, shall we say, like a gentleman, and yet be obsessed by extravagant beliefs; and psychiatry for me includes a much wider field of abnormal humanity, such as the very eccentric crank or paranoiac, the sexual offender and addict, even the difficult and wayward child, the moron linking the high-grade imbecile with the psychopath, the delinquent and degenerate; all these unfortunates come fittingly within the ambit of the psychiatrist. There has been a steadily growing interest in psychology for many years amongst the better educated. Consciousness, the subconscious, behaviourism, instincts, complexes, obsessions and the inferiority complex are a few of the many terms in common use by even the man in the street, and psychoanalysis as the very last thing is hailed as an entirely new discovery, thanks to the schools of thought advanced by Janet, Freud, Jung and Adler. These have plunged the scientific and educated world into never-ending controversies, in which there is much unconscious humour, even though at times they have exhibited poor humanity in its least presentable phases. Nevertheless these protagonists have afforded us new views and new methods of approach, more particularly in the case of the psychoneurotic; and for this we should be properly grateful. But this I regard as the subject matter for another Beattie-Smith lecture at the hands of a modern, rather than for presentation by an elderly Victorian, more at home in mental hospitals than in psychological clinics, and only too conscious of the shortcomings in his own medical education in the very subjects which it is now his obvious duty to urge for greater consideration in the medical curriculum of today. The recently qualified medical practitioner has had a practical and exhaustive education on the physical side. He has been less concerned with the psychic side, and will remain so until a few years of general practice have passed over his head. Then he will begin to realize that the mind and make-up of his clients play a great part in the illnesses he is called upon to treat, and that these psychological terms, definitions and symbols are of practical use in the explanation of the otherwise complicated and puzzling problems that he has to solve.

In the Anne MacKenzie Oration, which I had the honour to present in Canberra four years ago, I seized the opportunity to air the opinion that courses in psychology should be included in the medical curriculum, if only as a prelude to the teaching of mental disorders and defects. I make no apology for introducing the subject again, although admitting that something has been achieved; I am pleading for more, even though there is some truth in the plea that the curriculum is



already overcrowded. The University of Sydney has a professorship in psychiatry and has established a course and an examination for a diploma; but its arrangements are such as to preclude graduates from other universities sitting for it. This is the more unfortunate as the number of candidates in other universities likely to come forward is quite insufficient to establish diplomas in each medical school; but it is conceivable that if certain courses could be arranged in each university, with a short course of specialized study for four or five months in Sydney, many more candidates would be forthcoming, and the various State Governments would be prepared to cooperate by granting additional leave of absence for the purpose of a short course to the medical officers in their lunacy departments. They might even be induced to follow the practice obtaining in England by granting additional pay to the holders of the diploma and of recognizing it as a recommendation for promotion. When I say that some advances have been made, I think I should enumerate them.

In the first place, psychiatrists have been appointed to each of the teaching hospitals, and useful teams are at work, chiefly in the out-patient departments. In some hospitals beds are being made available and lectures are given on the psychoneuroses, and at the Children's Hospital a trained psychologist is available for intelligence testing. Moreover, fifteen lectures in psychology are given by Professor Gunn to the medical students in the fourth year. These are very well attended; but, in my opinion, a junior course should be given in the second or third year and a senior course in the fourth or fifth year. The result would be that the course in psychiatry taken in the last years would be much better appreciated and would be of greater value. On this latter question I desire to emphasize the difficulties surrounding the teaching of the subject practically. At present some twelve lectures are given by the medical superintendent at Royal Park. Some of these are given in class; but such demonstrations are extremely difficult to give. It rarely happens that a patient suffering in mind, suspicious and introspective, can be induced to face a class of students and to expose and discuss his worries and beliefs; and moreover, since a correct diagnosis and the subsequent prognosis are not easily reached by one or even two examinations, class lectures leave a very great deal to be desired. It seems to me that the only satisfactory way to impart instruction on this subject is for a student or two, but not more, to accompany the medical superintendent, who is also a lecturer, on his principal daily round through the mental hospital wards. Admitting that such a duty would entail a great deal more work for the superintendent and add to the labours of the student, I am convinced that it would prove to be the most satisfactory method of imparting the necessary instruction, and would provide the requisite practical experience. The part-time clinical appointments that operated for a few

years at Royal Park, and unfortunately terminated during the years of financial depression, were undoubtedly useful and attracted subsequent appointees to the permanent staff of the department. These have been revived as a result of the necessity for additional help in connexion with the administration of insulin to the large number of patients coming forward as suitable for this treatment. I trust that these appointments will have come to stay permanently.

What I have said with regard to the requirements and difficulties in the teaching of psychiatry applies also in the case of psychoneurotics. Each patient is a supreme individualist, and requires lengthy and private and particular attention; and as these people will constitute a not inconsiderable proportion of the clientele of the medical practitioner, they are well worth catering for in his period of tutelage. Further, there is the question of the congenital mental defective to consider; and as he unfortunately constitutes too large a proportion of our population, and in view of the possibility of the enactment of special legislation for the care of these children who never grow up, it is essential that the medical practitioner should have a good working knowledge of their requirements, so that the process of certification should be efficiently performed in their case. The wealth of clinical material in our mental hospitals, for both teaching and research purposes, is so great that it is almost impossible to assess its true value; and when one realizes that the Lunacy Department of Victoria possesses an excellent pathological section, one is inclined to wonder why it is not possible to have clinical positions made available to senior students or recent graduates.

However, the urge to go overseas for other degrees and diplomas, with a view to the subsequent obtaining of a footing in Collins Street, is a very laudable ambition, although it may not always meet with its due reward; but a very useful, even if not a highly paid career, can be obtained in departments such as ours. It is unavoidable that there should be so much routine and clerical work, and continual contact with even the most incurable patients is imperative; but in every institution there should be ample opportunity for research work. Our mental hospitals are the only real training ground for the psychiatrist of the future, who is to be on the staff of general hospitals and of the psychological clinic, examining mentally deficient children, reporting on criminals, delinquents and sex offenders, and carrying out the work of placing misfits in an appropriate environment.

It is a source of intense satisfaction to me to find that the psychological clinic which I had asked for repeatedly and made provision for at Travancore, is already finding itself with so much work that applications are being made for its reduplication to cope with the increasing numbers coming from the children's courts for special examinations and reports. No juvenile offender should be sent to

prison or a reformatory until a thorough examination has been made by the officials of such a clinic, the importance of which will be immediately recognized when at long last a Mental Deficiency Bill becomes law.

The medical strength on the staff of mental hospitals will vary greatly with the type of patient the hospital cares for and with the number of recent admissions. Whilst an improvement has been effected in recent years, I should like to contrast our mental hospitals with that at Cardiff, in South Wales. This contains 800 beds and has an annual admission rate of 300; 200 of these patients are voluntary. For these there are a medical superintendent and four medical officers, a director of laboratories and seven research workers, a dentist, and, what is more important, a strong consultant staff of eight specialists. There is, moreover, the closest connexion with the University of Wales and its medical school and with the general hospital, an example which I trust will one day be followed in Melbourne. I have the greatest hope and belief that we shall shortly see a drawing together of the general hospital and the mental hospital. A physician of the mind will be on the staff of every hospital; every medical practitioner will be a psychiatrist, and so reach the treatment of mental disorders in their earliest stages. The prophylactic measures suggested by the Council of Mental Hygiene should be given effect to, particularly with reference to child study and vocational training, and to the provision of social workers and almoners for all types of institutions and agencies for social betterment. Then, and then only, will the psychiatrist or alienist cease to be regarded as an individual with curious tastes and predilections, and instead be looked up to as the apostle of common sense.

#### ANXIETY STATES IN GENERAL PRACTICE<sup>1</sup>

By K. B. NOAD, M.B., Ch.M., M.R.C.P.,  
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THE definition of anxiety given by a standard text-book of psychiatry is "a fear of danger usually from within, that is, impending physical illness". Anxiety is an emotion derived from fear and is thus bound up with the question of flight. It is natural then that many of the physiological accompaniments of the latter should characterize anxiety states. Rises in pulse rate and blood pressure, sweating, palpitation and dyspnoea are manifestations of autonomic overactivity, and features of the flight mechanism frequently found in anxiety states. It is probable that disturbances of secretion and motility, such as vomiting and diarrhoea, have a similar explanation.

<sup>1</sup>Read at a meeting of the New South Wales Branch of the British Medical Association on November 24, 1938.

#### The Causes of Anxiety States.

I have discussed the frequency of occurrence of anxiety states at the present time with a number of the impression that these conditions are found more senior members of the profession who have been in practice a great many years. Many of them have frequently today than twenty-five or thirty years ago. These impressions of men who have been thoughtful and careful practitioners surely merit some consideration. If they are correct then it is interesting to speculate upon the reasons for the increase. It is commonly said that the pace of life has increased, and that there is a greater strain upon the nervous system of the modern man and woman. If this be so, how can it be explained? One important reason is probably the development of the internal combustion engine, which Phillip Gibbs regards as "the most destructive agent of ancient peace, present beauty and future safety". "Thirty years ago", he says, "if the schoolboy were five minutes late for his tea, his mother did not turn pale and go to her cottage door with panic in her heart. If the husbandman came home even an hour late because he had stopped for a glass of ale in the 'Three Horseshoes', his wife did not expect his corpse to be brought to her on a stretcher."

The increase of city traffic has raised the problem of noise and its baneful results. Let me quote from the report of the New York Commission on Noise Abatement:

Noise interferes seriously with the efficiency of the worker. It lessens attention and makes concentration upon any set task difficult. In the attempt to overcome the effect of noise, great strain is put upon the nervous system, leading to neurasthenic and psychasthenic states.

In recent experiments with office workers, a 50% reduction in noise brought about a 5% increase in the production of typists. It is the action of noise causing nervous and mental exhaustion that leads to neurasthenia. This seems to be a much more common disease now than formerly.

Sir James Purves Stewart, in an article entitled "Noise and Nerves", writes:

Among the various factors which impose an increased burden upon our nervous system, noise is one of the commonest. The average human brain can withstand, whether naturally or by adaptation, a certain degree of stimulation, including many unpleasant stimuli. But if noxious stimuli are habitually greater than the individual's powers of resistance, or if the amount of rest and sleep are insufficient to replace the lost nervous energy, symptoms of exhaustion make their appearance. Other symptoms are emotional irritability, tremulousness, headaches and dyspepsia.

It is probably true that much less time is spent in the home today than thirty years ago. This must result in an increase of fatigue, the effects of which in the production of nervous disorder will be referred to again later.

The cinema has been indicted frequently as one of the causes of increase in crime, and it must be a factor in the production of psychological disorder. Though a source of enjoyment, relaxation and education to many, in my opinion the pictures have a pernicious influence, particularly on young people.



The outlook on life and sex of the average film, repeatedly exhibited before unbalanced minds, could quite easily lead to unhappiness and what our colleagues term frustration and sex rumination.

There is also much ado nowadays to foster what is called the "health consciousness" of the people. Health weeks are held, articles upon health subjects appear in the Press, as also do the diaries of doctors who tell. As long ago as 1868, Sir William Gull said: "Reading on medical topics often frightens men into a hypochondriacal state of mind". We all remember Jerome K. Jerome's classical account in "Three Men in a Boat" of the man reading in a medical dictionary and imagining he had every complaint except housemaid's knee. Many cases of anxiety neurosis have originated in a newspaper article, something seen on the screen, or something heard over the radio.

Surgery also provides confirmatory evidence. Coincidental with the increase of psychological disorder is the rise of surgical problems of autonomic overactivity. W. H. Ogilvie, in an address on "The Changing Ground of Surgery", comments on the decline of syphilis, the lessened frequency of strangulated hernia and extravasation of urine, the "high lights" of a pre-War emergency week, and the increasing importance of diseases depending upon disordered sympathetic activity, particularly duodenal ulcer, thyreotoxicosis and arterial hypertension. He says:

The very advance of civilization which has removed those troubles due to poverty and ignorance is bringing others peculiar to itself. I can mention only two factors that seem to be operative, the rush, the strain and the competitive element, and the constant feeling of insecurity in modern life; and the unnatural diet consisting largely of foodstuffs preserved to be eaten long after their time of preparation.

Attending my out-patients' department in one of the poorer suburbs of Sydney are many patients suffering from anxiety states. Broadly speaking these can be divided into four groups. The greatest number complain of palpitation, breathlessness, giddiness and headache, and fear heart disease or "blood pressure". We as a profession must accept some responsibility for the terror which the words "blood pressure" strike into the hearts of the people. Somebody has said that many a patient has left a doctor's room bowed beneath a column of mercury. This is probably very true. In the second group are the dyspeptics. In the third are those who complain of pain and fear a growth, and in the fourth are those who have respiratory symptoms and fear consumption.

In almost all of them factors can be discerned which have laid the foundation for the production of their neurosis. Economic stress, overcrowding (in one case twelve adults lived in one house) and often malnutrition contribute to many. Troubles in the home are revealed frequently, either due to the habits of one of the partners, the desire for children which cannot be fulfilled or is frustrated, or the fear of pregnancy in a woman who has borne

many children. The effects of fatigue can be seen in the faces of many of the women. Stengel says that fatigue is perhaps the most frequent and most important single cause of disease, and that under its influence one local manifestation after another, often functional but also organic, may develop.

The number of cases occurring about the menopause supports the view that nervous instability is greater at this time.

In private practice anxiety states reveal the problems of the various age-periods of life, and it is a failure to face up to these moral problems which provides a basis for most anxiety neuroses. Before middle age they are frequently bound up with the integration of the individual with life: examinations, the anxieties associated with making important decisions, the acquisition and maintenance of a satisfactory position in life, love and marriage. After middle age worries centre more round health, the fear of disease, the fear of death, and the satisfactory provision for the family.

#### Diagnosis.

In the diagnosis of anxiety states it seems superfluous to stress the importance of a thorough physical examination. This is necessary, not only to exclude organic disease, but also to gain the confidence of the patient, which is so important. When a long and discursive history is poured out, or if a piece of paper is produced, a great effort is often necessary to prevent the examination from becoming perfunctory. It must be remembered that neurosis and organic disease may, and often do, coexist, that either may be the forerunner of the other, or that they may be entirely separate from one another.

Let me refer briefly to some of the organic conditions which may simulate the anxiety state. Thyreotoxicosis is the most obvious and may be the most difficult to differentiate. Exophthalmos, if present, is a helpful indication of this condition, as also are great loss of weight and a high basal metabolic rate.

Hypertension, too, is most difficult. Some degree of anxiety is almost a *sine qua non* in every case, and in some a vicious circle which may be difficult to break may be set up, particularly if there has been medical mismanagement in the form of frequent discussion with the patient of the height of the blood pressure.

Peptic ulcer, particularly duodenal ulcer, must be carefully excluded by appropriate investigation. It is most disturbing when a patient persistently labelled "nervous dyspepsia" suffers a perforation or vomits a large quantity of blood.

Great care should be taken before diagnosing "mucous colitis", as a growth of the large bowel is frequently the cause of the symptoms. Here is a true story which redounds to the credit of the psychiatrist concerned.

A patient had been admitted to a surgical bed in a large hospital with the provisional diagnosis of "mucous colitis and neurosis". Investigations had been numerous

and prolonged; but the symptoms of the thin and anxious patient showed no improvement. As the honorary medical officer practised surgery and considered that psychological disorders did not come within his sphere, a consultation was arranged with a psychiatrist with a view to the patient's transfer to Broughton Hall. To the psychiatrist's credit he examined the patient *per rectum*, and, feeling a large growth there, wrote on the consultation sheet: "Provisional diagnosis, carcinoma of rectum; treatment advised, excision if still practicable."

Pulmonary tuberculosis with its toxic symptoms of fatigue, vague pains, indigestion and headache, is particularly important, since these patients are frequently of the type that could be labelled nervous, and it is surprising to note how often a history of previous nervous breakdown is given by patients actually suffering from pulmonary tuberculosis.

From a neurological point of view, disseminated sclerosis, with its emotional instability, may easily be confused with a psychogenic condition. Cerebral tumour also must never be forgotten. I remember still the shock I received upon finding that a patient from the country who had had a particularly worrying time and whose history had been typical of an anxiety neurosis, had an homonymous hemianopia, which proved to be the only physical sign present at that time, of a growth later found in the occipital lobe.

Some of you may have read Comroe's interesting follow-up study of one hundred patients whose condition had been diagnosed as neurosis. Of these, 24 had organic disease within an average period of eight months, and a review of their records suggested that in most instances this was present at the time of their original admission to hospital.

#### Does Anxiety Ever Produce Organic Disease?

Anxiety is a classical precursor of hyperthyroidism; it is inseparably bound up with duodenal ulceration and hypertension, and the presence of diabetes is often found after severe emotional crises have passed. Halliday in his articles on "Psychological Factors in Rheumatism" mentions many others such as asthma, *angina pectoris*, vasomotor disturbances of the limbs, and rheumatism.

The prognosis of these states depends largely upon the type of person, and the duration of the condition. In those with psychopathic tendencies the outlook is poor and a duration of over two years prejudices the possibility of permanent recovery. I have noticed that operation on these individuals often has a bad effect. The removal of an appendix, for example, in a case of mucous colitis, frequently aggravates the complaint.

#### Treatment.

In conclusion I should like to say a few words on treatment. Heretofore there has been too great a tendency to regard neurosis as a diagnosis of exclusion. When the long history with its diversity of symptoms has been heard and the suspected absence of organic physical signs confirmed, the doctor has often lost interest in the patient and has

made no effort to probe the patient's psychological background. But in these days I hope that there is an increasing recognition of the importance of this background and the part it plays in the production of disease and that a greater sympathy is being shown to sufferers from the neuroses, who were often regarded as nuisances.

It is important for us all to realize that psychotherapy is not the prerogative of the psychiatrist and that without it much of our other treatment is valueless.

Without wishing to give offence to our psychiatric colleagues, I feel that true anxiety states, that is, those with no psychotic taint, should be treated by practitioners other than psychiatrists, because I regard it as essential to foster in these people the idea that they are mentally normal. The mere fact that they are under treatment by a psychiatrist may be sufficient to create in their anxious minds the idea that they are mentally abnormal. A sympathetic general practitioner should be the most successful in dealing with these patients. Armed with first-hand knowledge of their home life, their economic and other difficulties, he is in an unrivalled position to give help and encouragement. But he must be prepared to pause and give some of his time and something of himself. A pat on the back and a bottle of bromide are not enough. Elaborate psychotherapy is unnecessary and is not even practised by psychiatrists. Much can be done of quite a simple nature to help. Reassurance, by dispelling the fear of organic disease, readjustment of sex difficulties and advice on difficulties in the home and a saner mode of living, particularly in the avoidance of fatigue and provision for recreation, will do much to bring about improvement.

Attention to the patient's physical make-up is no less important. Sepsis must be eliminated, anaemia treated, and nutrition improved, where these appear to be accessory factors.

In practice simple reassurance may not be enough and ancillary investigations such as X ray examination, electrocardiography *et cetera* may be necessary before the patient can be said to be reassured. Where possible a rational explanation of the symptoms should be given, in order, as it were, to supplant the anxiety. The negative assurance of the soundness of an organ, say the heart, may not be sufficient to satisfy an inquiring mind, which may immediately seek some new and perhaps erroneous explanation for the symptoms. Some cases prove most difficult and much time and effort may be spent with quite disappointing results.

#### Conclusion.

Finally, let us all remember the psychological side of our patients in these days of stress. It is universally agreed that these conditions are more common; then, if our attitude has been rather intolerant towards these unfortunates, let us abandon it and show more sympathy and understanding, for they, too, are ill.



In teaching students, the importance of psychological factors in the production of disease should be more freely stressed in lectures and ward rounds and not left to be dealt with by the psychiatrist's out-patients' department once a week. Only by such emphasis will the importance of this aspect in aetiology, diagnosis and treatment be brought home to these doctors of the future—a future which, unhappily, at the present moment, shows no signs of lessened stress.

#### ANXIETY STATES IN GENERAL PRACTICE.<sup>1</sup>

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##### General Description.

THE anxiety states are that group of nervous and mental disorders in which the predominating symptom is one of abnormal anxiety or fear, the anxiety being abnormal in that it is present without apparent cause or occurs as an exaggerated grotesque reaction to a slight fear stimulus.

Anxiety is the emotion common to many conditions: anxiety neurosis, anxiety hysteria, Graves's disease, severe shock, depressive states and melancholia, and certain heart and senile conditions. I shall deal more especially with the pure anxiety neurosis.

Fear is the primary emotion aroused for defensive purposes by any threat to the physical body, and is aroused in its primary form even in adulthood by such threats as burning, suffocation, falling *et cetera*. As childhood progresses and the child, as it were, climbs its phylogenetic tree, the nerve paths which serve for the mechanism of fear mature, and there is no doubt that children have an enormous inherent capacity for fear, easily set in action by the slightest stimulus. It is probable that the fear experienced in childhood is the same primitive type of fear which was experienced by our forefathers as they lived in the primeval jungles under constant threat of physical destruction. Their survival depended on this then very necessary emotion, and this racial capacity for fear has been handed on to us all. To what extent this primitive emotion is developed depends to a large extent on the fear stimuli received in childhood.

As intelligence develops fear takes on a wider significance and becomes entangled in the higher mental processes and associated with other primary emotions, such as those of sex, of anger and of disgust, and that of the powerful herd instinct.

Thus fear becomes blended with other primary emotions into the fabric of the personality to form

a complex emotion called anxiety, which is aroused by any serious threat to the personality. Fear always remains the main content of anxiety, but the remaining emotional content gives to the whole its indefinability.

This blending of fear with the developing personality begins in childhood, when fear is naturally very strong, and by the time maturity is reached there is little in the personality that has escaped its malign influence. Much can and should be done in childhood to control and temper its inhibiting influence, and I do think that excessive stimulation of the fear reflex in children may lay the foundation for the anxiety neurosis in later life. One can easily imagine now a vast underground network of instinctive feelings associated with and blended with the emotion of fear, giving rise to a subconsciousness of which we are but dimly aware, and which has been called the *cenesthesia*. When our forces of control or repression are strong, as they are in health or when life is being lived fairly successfully or interestingly, we are able to keep this other consciousness under. Once allow these repressive forces of control to slacken or dissipate and this subconscious spring of anxiety feelings will well up into the conscious mind, flooding it with uncontrollable and inexplicable feelings of terror inadequately described as anxiety.

Once aroused, this excessive emotion may be discharged through the sympathetic nervous system, causing the physical signs of fear and giving rise to the clinical picture of true anxiety neurosis, which presents the following symptoms.

Recurring attacks of paroxysmal anxiety occur, sometimes starting with a palpitation or feeling of giddiness or other *paraesthesia*. This is immediately followed by a surge of anxiety into consciousness, a feeling of dread or horror, of impending dissolution, as if the personality had suddenly disintegrated and death was just around the corner. Mental confusion generally follows this volcano of emotion, and sometimes even loss of consciousness. The heart's action becomes rapid and sometimes irregular, and occasionally accompanied by severe cardiac pain. In severe cases the pulse becomes small and weak; there is general sweating, with a cold and clammy skin and extreme physical weakness, as in acute collapse. There are also dryness of the mouth and lips, sometimes vomiting and diarrhoea, pallor or flushing of the face, and dilatation of the pupils, and sometimes symptoms of air hunger and sighing respiration.

In between the attacks we find varying degrees of discomfort and incapacity, sometimes a complete incapacity to concentrate for more than a few moments, photophobia, increased sensitivity to noise, general irritability and emotionalism, extreme physical weakness, and a state of more or less fearful expectancy of the next attack. Sometimes the incapacity between attacks is not great and the patient is able to carry on in an inefficient way.

<sup>1</sup> Read at a meeting of the New South Wales Branch of the British Medical Association on November 24, 1938.

### Causation.

What are the conditions which allow this subconscious reservoir of unpleasant emotion to rise and take charge of the conscious mind? They can be considered under two headings, namely, factors which diminish normal control, and factors which create and stimulate anxiety.

#### *Factors which Diminish Normal Control.*

In normal mental health there is a good reserve of nervous energy always available for ordinary emergencies; consciousness can be easily directed and readily controlled, and inhibition of unwanted and irritating stimuli is practically automatic.

George Crile<sup>(1)</sup> postulates an energy-controlling or kinetic system, namely, the brain, the liver, the thyroid gland and adrenal medulla, which collaborate in the transformation of potential into kinetic energy to effect adaptive responses, muscular action, emotional excitement, fever *et cetera*, also that the cells of the organism are electric cells in which the comparatively acid nucleus constitutes the positive pole and the comparatively alkaline cytoplasm the negative pole, and the maintenance of the acid-alkali balance between the nucleus and the cytoplasm of the cells—the electric potential—is essential to life and furnishes the immediate driving energy of the living process itself. Its reduction to zero or equilibrium is death. He assumes that the electric potential within the cell is mainly due to oxidation and that in turn the electric potential within the cell governs oxidation, and that the thyroid maintains the continuous oxidation of the nerve cells and the adrenal medulla provides the fulminant which liberates the enormous discharges of nervous energy necessary to cope with graver emergencies of life. His histological studies indicated that in the normal state the lipid films surrounding the nucleus and cytoplasm offer a normal resistance to the passage of ions, that in exhaustion this resistance is lowered, and that this specific resistance disappears at death. This lipid membrane acts as a condenser for the storage and discharge of the accumulated potential energy generated in the cell. He showed that the physical factors which produce exhaustion or lowered potential of the nerve cell, as shown by loss of stainability and chromatolysis, were surgical shock, exposure to cold, long anaesthesia by ether or chloroform, hæmorrhage, emotional excitation, lack of sleep, septic absorption, muscular exercise, continued pain.

The symptoms of severe states of nervous exhaustion, such as surgical shock, are identical with those of severe anxiety neurosis, as are also the symptoms produced by injections of adrenaline, which cause a great discharge of nervous energy, with subsequent exhaustion of the nerve cells, and as are also the symptoms of Graves's disease, in which excessive thyroid secretion is causing continuous cellular overactivity through increased oxidation, with subsequent exhaustion of the nerve cells. One can thus

at least imagine a common denominator for the production of the symptoms of these diverse conditions, namely, a depletion of the energy of the nerve cells to such a severe degree that their very life is threatened; the anxiety which is aroused is a warning to consciousness of this threatened nearness of death.

In addition, as exhaustion of the nerve cells takes place its lipid membranes lose their capacity as resistors, and so what electrical potential remains is more easily poured out in response to stimuli; that is, as exhaustion of the cell takes place, the cell becomes more responsive or irritable and its discharges less easily controlled. So that in any condition which produces severe depletion of the energy of the nerve cell, whether from surgical shock or from long-continued emotional excitation, we not only lose that reserve of nervous energy necessary for normal function, but we also tend to lose control of the cell itself.

In addition to those factors mentioned which produce severe exhaustion of the nerve cell, must be mentioned influenza, the toxin of which seems to have a special affinity for nervous tissue, and thus frequently is the immediate excitant of many nervous and mental breakdowns.

#### *Causes which Create and Stimulate Anxiety.*

As in most illnesses, it is only when we get a multiplicity of causes operating on a particular soil that breakdown occurs, so it is in nervous and mental breakdowns. The soil is made up of an inherited capacity for great fear *plus* a more than normal sensitivity and absorbability of the nervous tissue, which easily allows of the laying down of either good or bad conditioned reflexes. The degree to which fear has been encouraged and woven into the child's and adolescent's mind, the occurrence of particularly fearful experiences—psychic traumata—the extent to which education has been able to teach both the understanding of self and the proper use and control of the instinctive forces, and the extent to which life and work and social activities are absorbing the creative energies of the individual and the physical and nervous health at the time—these constitute the soil.

The conditions which create and stimulate anxiety are as follows: the constant threat to the personality by the aggression of more powerful personalities with whom we are constantly surrounded; the fear of the ridicule of the herd for failure in the competitive race of play, work and social brightness; the fear of being deprived of things held most dear, of loved ones, of parenthood *et cetera*; the constant fear of economic failure; the fears of sickness, of pain, of death; and the fear of the social punishment when one feels the inability to deal with the rising tide of sexual feelings.

When control has been lost to such a degree as to allow subconscious anxiety to smash through into consciousness, either of two things may happen: normal control will fairly quickly be established



and the anxiety will sink below the surface again, or the forces of anxiety may be so strong or the forces of control so weak that the anxiety will continue to dominate consciousness indefinitely.

#### Treatment.

Treatment will be directed at increasing the forces of control and diminishing the forces of anxiety. The first will be helped by proper rest and sleep, if need be in hospital, which often serves the double purpose of providing rest and of removing the patient from the causative situation. The use of sedatives, which inhibit excessive discharges of nervous energy and allow of the gradual building of an adequate energy reserve in the nerve cells, is required. For this purpose a combination of bromide, chloral hydrate and "Luminal" is generally efficient. In addition one can give increasing doses of belladonna, sufficient to stimulate but not paralyse vagal activity; this tends to neutralize sympathetic overactivity and helps to produce harmony in the autonomic nervous system.

Control can also be increased by direct suggestion in a state of relaxation, and also by autosuggestion.

In dealing with the anxiety itself one finds that the first difficulty is the patients' attitude to the feelings or symptoms of anxiety present. Invariably they feel and think that they are about to die and that consequently there must be some dread disease at work. It is difficult when the patient feels about to die to convince him that this is not so; for feeling constitutes reality to the patient. It is futile and cruel to say there is nothing wrong; there is something wrong, but not what the patient thinks is wrong. He has to be convinced that his symptoms are disordered sensations and not the symptoms of serious bodily disease, and that no matter how bad he feels he will not die nor will he go insane. This can be accomplished only by giving the patient relief from his symptoms by the immediate removal of physical and psychic irritants, giving rest and sleep by means of sufficient sedative. Even a short complete rest from the emotional excesses of anxiety may be sufficient to restore control and recreate confidence.

From the onset of treatment psychological analysis should be proceeding till the doctor and the patient both have a clear understanding of the factors which have helped to form the structure of the anxiety and the mechanism of how the present catastrophe has arisen. Specific fears must be brought to light and discussed; and the patient advised how best to overcome them, wrong attitudes corrected and new attitudes developed.

Once the patient is able to start back into life, after a short respite, he must not pull out of the race again. Even though his pace be slow, he must keep on; though he stumble and fall, grow faint or even collapse, he must keep moving. To do this he must develop an attitude of indifference to his feelings; he must be able to feel about to die and

still be indifferent, to be able to say "even if I am to die I will die on my feet, doing some useful work or enjoying myself". Till the patient can absorb this attitude from his doctor real cure cannot begin.

And now let me say a special word about aggression. Aggression is one of the fundamental qualities of all living things, and a necessary one for personal survival. We are subjected on all sides from an early age to aggression and domination, sometimes from our parents, our brothers or sisters, and our mates and teachers, and this is extended through life to aggression from our family, our friends and enemies, our employers and competitors, our social and religious organizations and our political systems; and all the time we are having our own aggressive impulses thwarted by these more powerful ones outside, giving rise to that very unpleasant emotion of hate. Anxiety is the reaction to a serious threat of aggression or destruction to the personality from outside or from within, and at the same time constitutes an attempt to avoid it. Unfortunately the patient sometimes finds that the anxiety reaction does overcome the threat of aggression, and thus he discovers a valuable weapon to protect himself against aggression, as, for example, the anxiety brought about by attempted intercourse in a woman who resents the approaches of a husband whom she dislikes, and by this means keeps him away. Sometimes anxiety attacks may be the means by which the patient is able to dominate his environment, as the elderly father who has an anxiety heart attack every time his only daughter reaches out for independence or would take a lover. Florence Nightingale for fifty years was able to dominate even Cabinet Ministers by the threat of a similar attack, but fortunately for a good purpose.

Again, anxiety attacks may often be a means not only of getting sympathy, but of avoiding responsibilities, and can soon become an excuse for a lack of any real effort. Although the anxiety may arise quite genuinely in the first instance, it may soon be pressed into useful personal service, so adaptive is the human mind.

This motivation is not conscious, but, if present, can easily be made so if the patient is really anxious to get well. Once such unworthy aims are brought to view, the patient soon throws them overboard.

When symptoms of neurosis are used in this purposive way as a means of either avoiding aggression or of being aggressive, or of avoiding responsibility, we can apply to them the term "neurotic" as used in the condemnatory popular sense. However, all symptoms of neurosis are not neurotic in this sense and should not be confused with them. All artificialities and affectations of manner which the patient has developed to cover up deficiencies of character should be discovered if possible and removed, as living life in this way involves unnecessary strain and prevents normal development.

The patient should be helped to start, as it were, from bedrock again, with his personality stripped of all fears and affectations and false sentimentalities, to be content to be just himself, even if it means he has to be a simple, humble kind of person. He should be trained to be able to look deep into the recesses of his mind without the slightest fear, to be able to think even of death itself with composure, and on this foundation of mind he can then build a personality which will function easily and efficiently within its limits and be reasonably immune from future emotional catastrophes.

#### Reference.

<sup>(1)</sup> George Crile: "The Phenomena of Life".

### NERVE ANASTOMOSIS IN THE TREATMENT OF FACIAL PARALYSIS.

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FACIAL paralysis is a most distressing condition. It constitutes a heavy handicap for any person in the battle of life, and the psychical effects may be serious. Ulceration of the cornea is apt to occur and it may become necessary to suture the eyelids together in order to avert the loss of an eye. Dribbling of saliva sometimes occurs and is a most unpleasant complication.

Various procedures have been advocated and practised by surgeons in the treatment of facial paralysis. Full restitution of function is to be expected only when the paralysed muscles are brought once more under the control of the nerve cells in the seventh cranial nerve nucleus. In practice this is not often feasible, but when the nerve has been interrupted in the region of the middle ear an attempt should be made, after the method of Duval and Ballance, to induce the living axones of the proximal segment of the nerve to grow into the distal segment. Usually an autogenous nerve graft must be inserted to bridge a gap in the nerve. The results, as reported by Duval, are most encouraging. In successful cases not only is there recovery of tone in the facial muscles, but emotional movements, synchronous with those of the other side, reappear.

When, however, the facial nerve has been damaged within the skull, such an operation is scarcely feasible. It is then necessary to graft living nerve fibres from some other source to the distal extra-cranial portion of the paralysed facial nerve. Several "donor" nerves have been used. The spinal accessory nerve was used by Drobnik in 1879 and by Faure and Furet in 1898. The hypoglossal nerve

was employed by Korte in 1901. The hypoglossal nerve would seem to be the most satisfactory source of living axones, as its nucleus is in closer association with that of the facial nerve. The movements of the tongue are more closely associated with those of facial expression than are the movements of the



FIGURE I.

Photograph of patient in Case I two years after injury to the right facial nerve, and just before a hypoglossal-facial nerve anastomosis was performed on May 4, 1934. The boy is attempting to close the right eye and draw up the angle of the mouth on the right side.



FIGURE II.

Photograph of patient taken on December 2, 1937, to show recovery of power in the right facial muscles. The face is shown in repose.

neck and shoulder. Paralysis of one-half of the tongue, which results from section of the twelfth cranial nerve, gives rise to but little disability as a rule.

It is well not to delay over-long in resorting to nerve grafting, as the paralysed muscles tend to degenerate and later may not respond well to



FIGURE III.

The boy in Case I is shown voluntarily setting the right facial muscles in contraction.

nervous influences. In Case I, however, grafting was not resorted to until more than two years had elapsed after the injury to the facial nerve; yet there was excellent recovery of voluntary muscle



contractions. In Case III nerve anastomosis was performed more than nine months after the injury to the facial nerve. Recovery of muscle power was quite good.

#### Case I.

On March 24, 1932, a boy, aged seven years, was operated upon elsewhere for middle-ear disease. The right facial nerve was injured, with the result that the right facial muscles were completely paralysed. The photograph (Figure I) was taken in April, 1934. A hypoglossal-facial nerve anastomosis was performed on June 4, 1934. In November, 1937, the boy was well and apparently not inconvenienced by the paralysis of the right half of the tongue, which showed surprisingly little wasting. In repose there were slight flattening of the right side of the face and widening of the right palpebral fissure (Figure II). Contractions of the facial muscles could be produced voluntarily. The eyelids could be closed, or the



FIGURE IV.

Photograph of woman (Case III) taken on June 20, 1937, to show right facial paralysis caused by damage to the facial nerve at operation on August 3, 1936. The right eyelids are sutured together. The face is in repose.



FIGURE V.

Photograph of patient (Case III) taken on November 21, 1938, to show recovery of power after a hypoglossal-facial nerve anastomosis, performed on June 25, 1937, nine months after the injury to the facial nerve.

angle of the mouth elevated, and these movements could be carried out independently (Figure III).

It is noteworthy that an interval of more than two years elapsed between the time of injury to the facial nerve and the date of the nerve anastomosis. During this period no particular care was taken of the paralysed facial muscles, which, however, recovered very well in response to the ingrowth of living axones.

#### Case II.

On March 2, 1937, a man, aged thirty-four years, was operated upon for the removal of a right-sided acoustic neurinoma. Facial paralysis on the right side resulted from damage to the facial nerve, and ulceration of the cornea necessitated suturing together of the eyelids. On June 11, 1937, the proximal end of the divided right hypoglossal nerve was anastomosed to the distal end of the right facial nerve. On June 25, 1937, fascial slings were inserted to support the angle of the mouth on the right side; but although this procedure was effective for a time, the cheek soon sagged, until the disfigurement was as bad as ever. In a few months, evidence of reinnervation of the right facial muscles was shown by a lessening of the deformity and general improvement in tone of the face, and the ability of the patient voluntarily to contract the facial muscles.

#### Case III.

A woman, aged twenty-five years, was operated upon on September 3, 1936, for the removal of a neurofibroma of the right acoustic nerve. The right facial nerve was damaged and later it became necessary to suture the right eyelids together in order to protect the cornea. On June 25, 1937, a right hypoglossal-facial anastomosis was performed. The



FIGURE VI.

Same patient as shown in Figure V.

photograph (Figure IV) shows the appearance of the woman before the latter operation. Good recovery of tone occurred in a few months, and voluntary contractions of the facial muscles became possible.

On November 21, 1938, the lids were still sutured together, but apart from this and absence of wrinkles on the right side of the forehead, the face, in repose, appeared to be almost normal (Figure V). On smiling the right side of the face did not participate, but movements occurred in



FIGURE VII.

Photograph of a girl (Case IV) taken soon after operation for the removal of an acoustic neurofibroma, to show the effects of paralysis of the left facial nerve. The girl is attempting to close her eyes and raise the angles of the mouth.



FIGURE VIII.

Photograph of the girl (Case IV) depicted in Figure VII. This photograph was taken seven months after the performance of a hypoglossal-facial nerve anastomosis on the left side. Powerful voluntary contractions of the left facial muscles are possible.

speaking which served fairly well to mask the facial paralysis. The muscles could be made voluntarily to contract (Figure VI). The right side of the tongue was much wasted, and on protrusion the organ deviated to the right of the mid-line; but it could be moved voluntarily well over to the left side.

#### Case IV.

On June 29, 1937, a girl, aged seventeen years, was operated upon for the removal of an acoustic neurinoma on the left side. She recovered well but with a left facial paralysis (Figure VII). On July 30, 1937, a left

hypoglossal-facial nerve anastomosis was performed. After this her speech was rather lisping in type; but it has gradually improved with the passage of time. In November, 1937, her face appeared to be almost normal in repose, and the left facial muscles could be made to contract voluntarily. In conversation the lack of emotional and synchronized movements on the left side was evident. Figure VIII is a reproduction of a photograph taken in February, 1938, seven months after the nerve anastomosis, to show the recovery of voluntary power in the facial muscles.

In November, 1938, the girl was very well and serving as a waitress in an hotel. In speech there were some movements of the left side of the face. The left side of the tongue was atrophied, but movements of the organ were not noticeably affected.

#### THE ALLEGED PAINFUL SEQUELÆ AND POOR RESULTS OF ANTROSTOMY.

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PROBABLY NO operations capable of giving so much relief and satisfaction happen to be looked upon with so much dread and suspicion as are those on the antra. Such suspicions are not confined to the lay public, for I know of medical practitioners who advise their patients never to submit to them.

Such an attitude may possibly be justified when such operations are performed by those not trained to know in which cases operations should be performed or how they should be done; but as I see the patients operated upon under general anaesthesia, I cannot comprehend the prevalence of this attitude. It is the usual experience for patient after patient to express extreme surprise at the slight discomfort through which he has passed, and to compare his experience favourably with that of friends and relatives. It is quite the exception for a patient to suffer much.

In order, therefore, to attempt to bring matters to a better understanding, I have penned these notes; and not to obscure the main issues with the less important issues, which are nevertheless of value, I have tried to keep to the major issues only.

The unpopularity of these operations may be due to post-operative pain, post-operative swelling or to poor results.

Usually pain after operation is slight; it is severe in less than 5% of cases. Those who have had some other operation at the same time usually complain of the pain from the other operation, but assert that they have slight or no pain from the antral operation unless they press on their cheeks, a procedure for which there is no call. One patient who reacted more than usually to hyoscine given before a double radical antrostomy performed under local anaesthesia, upbraided me the next day for having forgotten to come and operate on her. She

had no post-operative swelling or discomfort, and only a trace of sanious discharge.

When pain is severe, it is generally of a neuralgic type. It has occurred in my experience with greater frequency after local than after general anaesthesia. Usually when general anaesthesia is used pain from the infraorbital nerve can be avoided if the surgeon refrains from elevating the periosteum from the anterior surface of the antrum high enough either to expose the nerve or even gently to nip it between the elevator and the upper edge of the infraorbital foramen. Neuralgia of the dental nerves is best avoided by extreme gentleness in dealing with the antral mucosa. When it is to be removed, the mucosa should be elevated and then stripped out with forceps. A curette may be used in a reversed position as an elevator, but curettage or, even worse, the use of antral burrs should never be permitted. The dental nerves often lie in grooves on the antral walls under the mucoperiosteum and are injured with the slightest trauma.

Post-operative swelling is most frequently due to hæmorrhage into the substance of the cheek. This is best avoided by the correct placing of the incision in a Caldwell-Luc operation. If the mucosa is followed down from the superior buccal fornix, it becomes at first loosely and then firmly attached to the periosteum of the anterior surface of the maxilla. If the incision is made superior to the point at which they become loosely attached, the subcutis of the cheek is opened up and blood can infiltrate into it. It is advisable at the same time not to make the incision lower than is absolutely necessary. The periosteum of the anterior surface of the antrum must be elevated in one continuous sheet or again the subcutis of the cheek is exposed.

Another cause of swelling is infection. When one considers that the operation is performed upon an infected cavity, it is remarkable that cellulitis is not commoner. I do not know of any way to prevent its occurrence, except that I find it follows operations performed under local anaesthesia more frequently than those performed under general anaesthesia. As a rule it responds rapidly to treatment with fomentations.

The reason for poor results from the operation will be considered under the following headings: (i) operations performed in unsuitable cases, (ii) unsuitable operations, (iii) other nasal lesions which have been overlooked, (iv) technical failures in operations.

#### Operations Performed in Unsuitable Cases.

**Allergy.**—When a patient has an allergic rhinitis, one should move warily before advising sinus operations. As I have emphasized previously,<sup>(1)</sup> it is best to have the allergic condition of such patients investigated before a surgical operation is performed upon them. Most of those with allergic rhinitis have chronic or intermittent thickening of the antral mucosæ, but it is not rational to operate upon the antra unless infection is also present. If



the patients never have any pus in the postnasal discharge, it is well to be especially wary. In the presence of infection, operation may be performed either because the patient is allergic to the infection or because the infection is secondary to the allergic condition but does not clear up when the allergic condition is treated. All these allergic patients should be warned that they are still likely to have nasal allergic symptoms even after operation. At present, amongst those not warned, there are many dissatisfied patients who think that the remaining allergic symptoms are due to persistent antritis.

**Atrophic Rhinitis.**—In most cases of atrophic rhinitis of long standing the antra appear dull on radiological examination, but whatever may be the ætiology of the disease, practice shows that, if such antra are operated on, the symptoms of atrophic rhinitis usually get much worse. Unfortunately it does rarely happen (it happened to me once) that the atrophic rhinitis is only beginning to develop at the time that the antral operation is performed. As the disease progresses, the patient thinks that the nasal crusts and discharge are of antral origin, and is naturally dissatisfied.

**Syphilis.**—One of my patients suffered from a chronic antral discharge that did not clear up for months after operation, but it ceased soon after the blood was found to react to the Wassermann test and antispecific treatment was instituted. It is possible that treatment might have cured the patient earlier without operation, since nothing to suggest more than a simple chronic antritis with fibrosis of the mucosa had been found at the operation.

Another patient was sent to me with a diagnosis of bilateral acute antritis and ethmoiditis. Polypi were present in both middle meati, there was a copious nasal discharge, and there was a boggy swelling over the region of each lachrymal sac and over each antrum. The general symptoms were hardly severe enough to fit in with the local findings, so a blood Wassermann test was performed and the reaction was positive. The sinusitis and periorbitis rapidly subsided with antispecific treatment.

**Unnecessary Operation.**—Unnecessary operations are sometimes performed in unsuitable cases. If in acute cases in which palliative methods have not been tried, the patients are operated upon and survive the risks of bone infection, the operator not infrequently gets undeserved credit. Equally good results could have been obtained without operation. Another type of case in which operation is frequently performed is that in which the patient has symptoms due to some other cause, but in which the physician discovers that the antral mucosa is still thickened immediately after an acute cold. In such cases the patients naturally are annoyed after operation for the real cause of their symptoms has been overlooked. An X ray examination repeated later would have shown that the mucosal changes were temporary and not chronic.

#### Unsuitable Operations Performed.

An intranasal antrostomy is unsuitable in chronic cases, for in them such changes have occurred in the mucous membranes that cure following drainage alone cannot take place, and the mucosa must be removed. When, therefore, there is any doubt as to whether there may be a long standing mild antritis underlying the more recent and obvious subacute or chronic antritis for which the patient is being treated, it is wise to warn him that a radical antrostomy may be necessary later if an intranasal antrostomy is performed. It is better, therefore, to be on the safe side and to advise radical antrostomy in such doubtful cases. In this district the majority of patients coming to operation require the radical procedure.

The radical antrum operation is not suitable treatment for small children, owing to the danger of damage to unerupted teeth. Some operators will not perform it until all the upper anterior permanent teeth have erupted, and this may not be until the age of twelve or thirteen. Usually, however, a radical antrostomy can be performed without much risk of such damage in patients from the age of seven onwards. The anterior antral openings should be placed higher and more laterally than usual. If any unerupted tooth is inadvertently exposed, it should be removed, for infection of the space between it and the bone will keep up the antritis.

When an antral infection is hyperacute and will not subside with palliative treatment, it is advisable to avoid radical antrostomy, even if the infection is superimposed on an old chronic one, for in this operation cancellous bone is exposed and risks of bone infection are increased. In such circumstances an intranasal operation can be performed with comparative safety, and if the condition does not completely clear up, the chronic antritis which persists can be treated by a radical antrostomy later.

#### Other Nasal Lesions which have been Overlooked.

Of all the causes of dissatisfaction after antrostomy, the presence of other lesions which have been overlooked is the commonest. Except in cases of antral infection of dental origin, the infection is usually bilateral. If one side is much more involved than the other and is operated upon, and if the side not operated upon gets worse, the patient thinks (unless there is obstruction to discharge causing pain) that the postnasal discharge is evidence that the operation has not been successful, for a patient is unable to detect from which side a postnasal discharge is coming. This can be avoided by performing a unilateral operation only when a lesion cannot be demonstrated on the opposite side.

Among 312 consecutive patients requiring radical antrostomy, treated in private practice, I found a bilateral lesion in 262. In only 50 cases could a lesion be detected on one side only, and five of

these unilateral cases were of dental origin. It will therefore be seen that, if one excludes cases of dental origin, in only 14.6% of this series was the bilateral operation not required.

In the past, the great bugbear of the treatment of antritis has been the coincident involvement of the upper nasal sinuses, and no satisfactory treatment for these has been available. I say this advisedly, for although in many cases the trouble cleared up with one of the numerous varieties of ethmoidal or sphenoidal operations, there was no operation which could be relied upon to clean out all the infected paranasal sinuses in the same way as can be done with the antra or frontal sinuses. With the older methods operations frequently, if not usually, had to be abandoned owing to the view becoming obscured by hæmorrhage. Sphenoid openings usually closed down after operation until they reached the size of normal ostia. This has all been changed by the introduction of the Ferris-Smith<sup>(2)</sup> operation of fronto-ethmo-sphenoidectomy. I shall not go further than to mention that this is an operation which gives a field made dry of blood by the combination of local anaesthesia and the ingenious ligature of the posterior ethmoidal and sphenopalatine arteries. The posterior ethmoidal cells are easily cleaned out, as the middle turbinate is removed; and sphenoidal drainage is complete, as both anterior wall and floor of the sphenoidal sinus are removed. The external incision is closed by primary suture, a negligible scar being thus ensured; and permanent drainage of the area is obtained by use of a Thiersch skin graft held in place for the requisite time with a specially made rubber bag. Special instruments are a necessity and the operation cannot be termed an easy one; but it has put into our hands a method that will thoroughly treat an area in which we could before only dabble; it is probably the greatest achievement of oto-rhino-laryngology of the last twenty years.

Nasal obstructions are a frequent cause of dissatisfaction after operations on antra, and when deflected septa, hypertrophied turbinates *et cetera*, cannot be dealt with at the time of operation, they should be dealt with subsequently; but their presence should have been pointed out to the patient at the original consultation. The importance of nasal obstructions is even greater in children than in adults. Sometimes a deflected septum must be left until a child is older, but with increasing experience, more and more deflected septa can be dealt with in children. When, however, the deflection reaches far forwards, the operation should be stopped before the cartilaginous bridge is weakened, and in some cases this will mean leaving so much obstruction that little benefit will accrue. Those skilled will recognize this beforehand and advise waiting a few years first, when, owing to the increased strength of the alar cartilages, a more extensive operation can be performed.

#### Technical Failures in Operations.

##### *Intranasal Antrostomy.*

However carefully intranasal antrostomies are performed, very often the opening made will not remain patent. When the floor of the antrum is unduly high, the opening may have to be made in the middle instead of the inferior meatus. The ease of the operation is increased if the surgeon first infracts the inferior turbinate by gripping it with Luc's forceps and rotating it around a horizontal axis. The main cause of a poor permanent opening is the leaving of tags of mucosa and bone splinters. This is avoided by the use of a suitable technique, but the difficulties, especially in children, are such that they will sometimes be left in spite of all care. In adults, a good permanent opening can be assured if a Denker's type of opening is made first. The naso-antral wall is then clearly visible and all three components (bone and two layers of mucosa) are removed together by biting forceps. The curved rasp technique is that most likely to produce tags. Various harpoons are useful in bringing bone splinters, when they form, within reach.

##### *Radical Operations.*

Poor permanent drainage openings may be due to an unduly high floor of the antrum, when a middle should be substituted for an inferior meatus opening. Sometimes one finds openings which have been made too small in the first place; more frequently, however, the opening is a good one, but is covered by an inferior turbinate reaching the floor of the nose. This is easily dealt with by the trimming of the lower border of the turbinate. Removal of too much tissue will cause a dry crusting nose which is more trouble to the patient than the original infection. If tags are left at the operation, they may during the healing process reconstruct the naso-antral wall at the site of the opening. As the area can be under direct vision at the operation, such a defect should be avoided by caution, avoidance of hurry, and the use of good illumination and suction. One of the most troublesome forms of poor drainage is that caused by the organization of blood clot. This has been a real trouble, but I have got over it by means of a rubber bag technique, which I hope to describe in more detail shortly. Briefly, however, the method consists in the introduction of a rubber bag into the antrum through the nose towards the end of the operation and its inflation with air. The bag not only displaces any blood from the antrum, but also keeps blood away from the naso-antral opening. It is removed the next day via the nose, and does not start fresh bleeding, as does the removal of gauze packing. I have found the openings remain permanently larger, and that post-operative washings become clean sooner after this technique than previously.

*The Overlooking of Infected Dental Stumps.*—A dental cause for sinusitis is not present in as many



as one in 20 cases, and is therefore liable to be overlooked unless obvious. When, therefore, an antrum fails to become clean after operation, dental X ray pictures of the alveolar process on that side should be taken, even if the patient is edentulous.

**Infected Antral Mucosa Remaining.**—Previously it was believed that to remove all the antral mucosa would cause drastic results, as ciliated columnar epithelium was thought to be incapable of regenerative powers.<sup>(2)</sup> This has, however, been disproved,<sup>(4)</sup> and the whole mucosa can regenerate and possess active cilia again. Operators vary in their treatment of mucosa; some hardly ever remove any; others remove only very thick mucosa; others mildly curette the thickest portions of a mucosa; whilst I strip out all antral mucosa when a radical antrostomy is being performed. This does not appear very logical, but I do so because previously I performed double radical antrostomy and, finding the mucosa nearly normal on one side, have spared it. Later, quite a high proportion of these patients returned with chronic discharge from the antrum in which the mucosa was spared, whilst the one from which the mucosa had been stripped was healthy. When the one last giving trouble was opened, the antral mucosa in it was then found to be very thick and diseased, and when it was stripped out, both sides were cured.

#### *Bucco-Antral Fistula.*

Bucco-antral fistulae are most frequently caused by careless suture of the buccal mucosa. If a piece has been turned in, a fistula is more likely to occur than if no suture has been used. Blood clot tends to distend the opening and may act as a predisposing cause to a similar fistula. Another cause is the removal of the anterior antral wall to a level much below that of the original incision. The mucosal flap then lacks adequate support during healing. Such fistulae can usually be closed by the judicious use of solid trichloroacetic acid; but such a reagent can do much more harm than good unless used by a person experienced in its use.

#### **Conclusion.**

In conclusion, I should like to point out that to get good results in oto-rhino-laryngology, as much training, care and attention to detail are necessary as in other branches of the medicine. Moreover, if those without adequate training in the whole of oto-rhino-laryngology interfere with a part of the subject, such as antral surgery, they will undoubtedly in time bring discredit upon themselves. I regret that space has not permitted me to deal with the subject more fully.

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- <sup>(2)</sup> Ferris Smith: "Discussion of the Treatment of Chronic Infections of the Nasal Accessory Sinuses", *Journal of Laryngology and Otology*, Volume L, August, 1935, page 604.
- <sup>(3)</sup> St. Clair Thomson: "Diseases of the Nose and Throat", Second Edition, 1919, page 8.
- <sup>(4)</sup> St. Clair Thomson: "Defence of the Air Passages", *Journal of Laryngology and Otology*, Volume LI, January, 1936, page 1.

## **Reports of Cases.**

### **A CASE OF ACUTE HÆMOCYTOLYTIC ANÆMIA WITH HÆMOGLOBINURIA.**

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#### **Clinical History.**

J.B., a girl, aged two years and three months, was admitted to the Royal Alexandra Hospital for Children, Sydney, on July 23, 1938, at 7 p.m. The child had been quite well until three days prior to her admission, when she had a shivering attack which lasted approximately half an hour. She recovered rapidly and became apparently quite well. Two days later at about midday she had an attack similar to the first, which, however, was followed in about two hours by the passage of dark urine. From that time her urinary output became diminished. She was admitted to hospital on the evening of the following day. Her urine was quite black in colour, and its volume for the whole day had been only five ounces. The child appeared to have suffered no pain. She had had no rash, sore throat, vomiting or melena. She had suffered from no exposure to cold, nor was she known to have come in contact with any of the recognized hæmolytic poisons. She had had no previous illnesses at all, and there was no relevant family history.

On examination the child was very pale, with a distinctly dusky tinge of the skin and mucous membranes. Her temperature was 37.3° C. (99° F.) and the pulse rate 140 per minute. The abdomen was very lax. The liver was of normal size, and the spleen was just palpable. There was no skin rash or evidence of bleeding into the soft tissues. The throat was not inflamed and the tonsils were healthy. A bowel washout produced a normal fecal result.

The specimen of urine brought by the parents was quite black, becoming purple in aqueous dilutions. The following qualitative chemical tests were performed as accurately as was possible with the deeply pigmented urine: (i) benzidine test for blood pigment, which elicited a strongly positive reaction in equal dilution with water; (ii) Benedict's test for sugar, which elicited no reaction; (iii) Heller's test for protein, which elicited a faint positive reaction; (iv) Gmelin's test for bilirubin, which elicited no reaction; (v) iodine test for bilirubin, which elicited no reaction; (vi) Schlesinger's test for urobilinogen, which elicited no reaction.

Microscopic examination revealed clumps of partially disintegrated red cells, but the total number was far too small to account for the degree of pigmentation of the urine. On incubation the urine proved sterile.

A blood count done at the time of the patient's admission to hospital (for details of all blood counts see table) revealed a gross normochromic anemia and evidence of a rising erythropoietic response. There was a considerable leucocytosis and many immature white cells were found. The blood platelets were normal in number. No evidence was seen of any intravascular parasites.

Although the diagnosis was not yet made, it was obvious that a severe intravascular hæmolytic process was proceeding, and already the marrow was making some response by pouring into the circulation a variety of immature red and white cells. Blood transfusion was regarded as being urgently necessary to replace the destroyed blood, and, we hoped, to arrest the hæmolytic process. Four ounces of citrated blood from the child's father were given the same evening.

Next morning the child looked slightly better, but the dusky tinge and the pallor were still obvious. The urine was reddish-brown and gave a strongly positive benzidine reaction. A fairly large quantity of urine was passed into the bed twice. The following results were obtained from

Table of Blood and Urine Changes.

Date.	Urine.	Erythrocytes per Cubic Millimetre.	Hæmoglobin. Per-centage of Normal.	Hæmoglobin. Grms. per 100 c.c.m.	Colour Index.	Reticulocytes per 100 Erythrocytes.	Red Cell Characteristics.	Leucocytes per Cubic Millimetre.	Per Hundred Leucocytes.							Blood Platelets per Cubic Millimetre.
									Neutrophile Cells.	Lymphocytes.	Monocytes.	Eosinophile Cells.	Myelocytes.	Myeloblasts.	Sugar Cells.	
23/7/38	Black. Bensidine test: very strong positive reaction.	1,990,000	35	6.1	0.9	3.0	Anisocytosis, polychromasia, polikilocytosis.	20,000	78	9	2		10	1		200,000
23/7/38	Blood transfusion, four ounces, given.															
24/7/38	Reddish - black. Bensidine test: strong positive reaction.	2,130,000	40	7.0	0.95	6.0	Anisocytosis, polychromasia, a few polikilocytes.	22,000	63	28			4	5		190,000
25/7/38	Brown. Bensidine test: positive reaction.															
26/7/38	Yellow. Bensidine test: no reaction.															
27/7/38	Clear.	1,630,000	28	4.2	0.8	20.0	Microcytes predominant. Polychromasia. Nucleated red cells, 2,000 per cubic millimetre (normoblasts 87%, erythroblasts 13%).	36,000	40	42	3	1	8	4	2	225,700
3/8/38	Blood transfusion, four ounces, given.															
4/8/38	Clear.	2,420,000	60	10.4	1.2	7.0	Macrocytes predominant. Polychromasia.	6,900	60	33	4	3				Numerous.
15/8/38	Clear.	3,150,000	65	11.2	1.0	0.5	Normal size, shape and colour.	6,500	70	28	2					Numerous.

Investigations made fourteen hours after the transfusion. A blood count revealed a slight rise in the number of red cells and an increasing marrow response. The leucocytosis with some immaturity of cells persisted. The fragility of the red cells was within normal limits. The plasma was pigmented by hæmoglobin, identified by the spectroscope. Serum from a normal control showed the same absorption bands, but more faintly. The direct Van den Bergh test applied to the blood gave a negative response.

Next day the child was less listless, and the dusky tinge was less obvious. She passed a fair quantity of urine four times, largely into the bed. It was less heavily pigmented, gave a strong reaction to the bensidine test, but contained no red corpuscles. Spectroscopic examination of a freshly voided specimen showed the typical absorption bands of oxyhæmoglobin.

Next day, the third since blood transfusion, the urine was yellow and gave a negative reaction to the bensidine test. No further hæmaturia or hæmoglobinuria occurred. The child was pale, but had lost the dusky tinge and was cheerful and well.

A blood count next day revealed evidence of an excellent marrow response and a striking leucocytosis. The hæmolytic process had now ceased, judging from the evidence of a urine free of blood pigment. But in the three days between this and the making of the previous blood count, hæmolytic had outstripped hæmopoiesis and caused a considerable fall in total red cells and hæmoglobin.

The same day the cells were submitted to the Donath-Landsteiner test. No hæmolysis was demonstrable in the

patient's serum, and no hæmolytic of the patient's corpuscles took place after the blood had stood at refrigerator temperature for one hour. The result of the test was therefore negative. A similar negative response was obtained with the corpuscles of a normal control. The blood Wassermann test also failed to yield a reaction.

The temperature, which had thus far varied between 37.3° C. (99° F.) and 37.8° C. (100° F.), now became normal, and remained normal throughout the remainder of the child's stay in hospital.

A week later neither hæmoglobinuria nor hæmaturia had recurred, but the child's pallor had improved very little. A further transfusion of four ounces of citrated blood was given, again from the father. A blood count next day revealed a higher level of red cells and hæmoglobin, but marrow response and leucocytosis were much less pronounced. A further count eleven days later revealed a satisfactory improvement and the child was discharged from hospital.

She has been seen at intervals since and has remained well.

#### Comment.

The process that took place in this child was an acute hæmolytic. Hæmolytic as we generally recognize it consists of a breakdown of both red cells and their pigment, and is usually regarded as a function of the reticulo-endothelial system. The hæmoglobin is broken down into simple iron compounds and iron-free bilirubin. The former are conserved in the liver and spleen and used



again in hæmopoiesis. The latter is slightly changed by the liver and excreted into the bile passages and so the intestine. Its presence in the blood in excess of normal produces jaundice, a raised icteric index and a positive Van den Bergh reaction. In the intestine this changed bilirubin becomes stercobilinogen. It is partly reabsorbed from the intestine, some to be stored in the liver and some excreted in the urine as urobilinogen.

This typical hæmolytic process was materially altered in this patient. Despite the gross hæmolysis, jaundice was absent. The presence of hæmoglobin in the blood plasma rendered the estimation of the icteric index and the performance of the indirect Van den Bergh test of little use, and these procedures were not carried out. The direct Van den Bergh test, though difficult to perform because of the hæmolysis, revealed no increase of bile pigment in the blood. Still more important was the absence of urobilinogen from the urine, though again the presence of hæmoglobinuria reduced the accuracy of the test. But there is no doubt that, despite the obvious and gross hæmolysis with destruction of red cells and liberation of hæmoglobin, there was little if any breakdown of this hæmoglobin. In other words, hæmocytolysis occurred without hæmochromolysis.

Hæmolysis therefore appears to consist of these two distinct lytic processes. We know little of their cause and nature. They may be initiated by separate stimuli. They may even be performed by separate organs or by different elements of the reticulo-endothelial system. That the process in this child was not a hæmaturia followed by lysis in the urinary tract is proved by the dusky tinge of the child's skin. The pigment that appeared in the urine was circulating in the blood stream and was recognized by spectroscopic examination of the plasma. For some reason there was sufficient renal damage to allow the passage of the large hæmoglobin molecule and a few red blood cells.

The marrow response to the disaster that had overtaken the erythron was a striking one. On the day of the child's admission to hospital, while the hæmolytic process was still at its height, there was considerable polychromasia and 3% of the red cells were reticulocytes. Next day this number had risen to 6%. Three days later it was 20%, and cells even as immature as erythroblasts were being pushed into the circulation in considerable numbers.

This is a very pronounced erythropoietic response. The agent that damaged the erythron had its destructive effect on the circulating blood and certainly not on the bone marrow. Lederer,<sup>11</sup> in discussing a similar condition, suggests it had a stimulating effect on both destructive and productive functions of the reticulo-endothelial system, producing hæmolysis and leucocytosis.

The leucopoietic response was also pronounced. Despite the fall in total red cells, there was a steady rise in leucocytes to 36,000 per cubic millimetre on the seventh day of the illness. Of these, 14% were immature in type. Lederer<sup>11</sup> points out that there are three factors producing this high level of the leucocyte count. Firstly, the marrow response to a severe anaemia includes increased production of white cells as well as red. Secondly, although there is ample evidence of destruction of red cells in this process, there is no evidence of destruction of white cells, which therefore "heap up". Lederer believes that these two reasons are not enough. The high leucocyte level and the large number of immature white cells, he holds, indicate that the whole disease process commences as an acute infection, which of itself causes a leucocytosis.

There is other evidence of an infective process, as Lederer also points out. The sudden onset with rigors and the pyrexia are suggestive. He cites the splenomegaly and the specific response to transfusion in the same cause. But one cannot agree that slight splenomegaly in a patient with a severe blood disorder has any such significance. A slight degree of splenomegaly does occur in a number of acute infections. But splenomegaly is also a feature of a number of blood dyscrasias which have not been proved infective in origin.

To discuss the specific response to transfusion is to sail ill-charted seas. This response can probably exist quite

apart from an infective process. It is probably true that hæmolysis caused by an infection may be stayed when antibodies in the donor's blood neutralize the toxin of the infecting agent. But such a triumph over infection by transfusion is not usual. Would that it were. It is just as likely that hæmolysins in the patient's blood, no matter what their origin, would be neutralized by the donor's antibodies.

Witts<sup>12</sup> does not believe that the process originates from an infection at all. He thinks that all the symptoms can be explained as a hæmolytic reaction, and points out that such a reaction with rigors, pyrexia and hæmoglobinuria occurs after transfusion of incompatible blood.

But whatever the cause, the case is certainly one of acute hæmolytic anaemia, and corresponds to two of the six cases described by Lederer.<sup>11</sup> His remaining four cases differed from this one in that the patients had no hæmoglobinuria, but definite jaundice in all cases and excess urinary urobilinogen in the two cases estimated. In other words, there was evidence of the complete hæmolytic process—hæmochromolysis as well as hæmocytolysis.

It may be that the cause was the same in all cases; the difference in clinical course may have been due to a difference in resistance by the patient. But one thing is certain. In the case reported here and in Lederer's corresponding cases there is strong evidence that hæmolysis consists of the two processes, cytotoxicity and chromolysis, probably initiated by different stimuli and perhaps even performed by different organs.

It is to emphasize this point, since our knowledge of hæmolysis is so scanty, that one ventures to suggest the name "acute hæmocytolytic anaemia" for the condition described here. It is a disease of unknown cause characterized by an acute onset, pyrexia, hæmocytolysis with consequent anaemia and hæmoglobinuria, leucocytosis and rapid response to transfusion.

#### Summary.

1. A case demonstrating an acute process involving the rapid intravascular breakdown of red blood cells, but not of blood pigment is described. It is characterized by a rapid onset, pyrexia, gross anaemia and hæmoglobinuria and a pronounced hæmopoietic response. Its cause is unknown. Rapid recovery followed blood transfusion.

2. A distinction is drawn between the two processes that constitute hæmolysis, namely, hæmocytolysis and hæmochromolysis.

3. The condition appears to be a clinical entity and is given the name "acute hæmocytolytic anaemia".

#### Acknowledgement.

I express my thanks to Dr. E. H. M. Stephen for permission to report this case.

#### References.

- <sup>11</sup> Max Lederer: "A Form of Acute Hemolytic Anemia Probably of Infectious Origin". *The American Journal of the Medical Sciences*, Volume CLXX, 1925, page 500.
- <sup>12</sup> Max Lederer: "Three Additional Cases of Acute Hemolytic (Infectious) Anemia". *The American Journal of the Medical Sciences*, Volume CLXXIX, 1930, page 228.
- <sup>13</sup> L. J. Witts: "Paroxysmal Hemoglobinurias", *The Lancet*, Volume II, 1936, page 115.

## Reviews.

### INTESTINAL TOXÆMIA.

CHRONIC intestinal toxæmia is perhaps a common condition, yet as a separate subject it has not received the same scientific and systematic consideration as other syndromes. The literature dealing with this phase of medicine has been in a chaotic state. J. W. Wiltse's book, "Chronic Intestinal Toxemia", is an attempt to bring the many sections into some definite order, and the author

has tackled the subject with great care and thoroughness, even at the risk in places of obscuring the clarity of expression by the mass of detail.<sup>1</sup>

The infected intestine has an influence on almost every other organ of the body and, conversely, many defects in other organs have secondary effects on the bowel; but the treatment of the condition of the bowel has received little more attention from the general practitioner than the recommendation of an enema or a purgative. The pendulum has swung at times to the other extreme, Lane's removal of the colon being an example of the radical surgical method that was adopted. Colonic lavage, on the other hand, is, according to the author, the sound application of the principles of conservatism and is designed for the restoration to health, rather than the removal, of the diseased organ. The writer does not deny the successes of surgery and advocates surgical measures when they are strongly indicated. He recommends that the practitioner obtain a sound knowledge of the theory of chronic intestinal toxæmia and its treatment before attempting to use any method of therapy suggested, lest the modality may receive erroneous criticism and fall into disrepute because of half-hearted measures which fail to produce the desired results.

In the introduction he boldly attacks his critics and explains why discredit has been the lot of the treatment in the past. The misconception that colonic lavage is merely a thorough evacuation of the bowels rather than a tubular or cellular drainage is stressed. The term chronic intestinal toxæmia is carefully explained and the syndrome is regarded not as a well-defined entity, but as presenting many variable factors, which must be linked together rather by virtue of our professional art than by scientific accuracy.

In the past focal infection has been considered as a defect in this or that unit, but Wiltzie has endeavoured to view the subject collectively. He makes an effort to encourage the idea that true specific immunity is a normal defence reaction of the organism and that as focal infection results in a chronic low-grade infection of the whole body, the mere removal of primary foci may not cure the patient. He insists, however, that colonic lavage can improve and restore the normal health and function of the colon, portal circulation, liver and biliary system. He makes only slight reference to non-surgical biliary drainage (Lyon and Swalm), but admits that this method, when used with colonic lavage, is of great value. More importance in a book such as this could have been given to non-surgical biliary drainage as a means of breaking up the vicious circle of chronic infection between the liver, colon and biliary system, because of the prominent part that is played by the liver in chronic toxæmia. Nine distinct claims for professional recognition of colonic lavage are given. Colonic therapy is defined as a system of treatment of disease, both local and general, by the use of colon irrigations and instillations, together with the use of such other auxiliary measures as may seem indicated. Indiscriminate and unintelligent colon irrigations are not regarded by the author as true colonic therapy.

The physiology of the liver is fully dealt with and the theoretical considerations of chronic intestinal toxæmia are abundantly supported by reference to various authorities. The anatomy and physiology of the colon are described at length, and two schematic line diagrams of the recto-sigmoid apparatus relative to the act of defæcation are included. In the chapter devoted to technique the author describes special apparatus used in colonic lavage as well as the more simple methods in which one or two rubber tubes are used.

The book presents a thorough and comprehensive study, which would be difficult to find in any other publication, of a condition which is the product of many causes. It may be read with benefit by the enthusiast of colonic lavage as well as by the sceptic.

<sup>1</sup> "Chronic Intestinal Toxæmia, with Special Reference to Colonic Therapy", by J. W. Wiltzie, A.B., M.D.; 1935. London: Baillière, Tindall and Cox. Crown 8vo, pp. 280, with illustrations. Price: 13s. 6d. net.

## CLINICAL DIAGNOSIS.

In the second edition of "Symptoms and Signs in Clinical Medicine", which E. Noble Chamberlain has written as "an introduction to medical diagnosis", there has been very little change in the form of the book.<sup>1</sup> The chief alteration has been the placing of all laboratory and scientific sections in two chapters at the end of the book; previously they were scattered throughout the text. This is an improvement.

While we realize that it is very difficult to include just enough and not too much in an elementary book, and that the clinical lecturer can lay stress on the points which he considers of greatest importance, it must be remembered that the student tends to take far more notice of the printed word than he does of the spoken statement; for this reason we would repeat that lax expressions must be studiously avoided. The lobes of the lungs cannot be palpated through the chest wall as the author states. Also, the average student in physical examination finds his greatest difficulties in the respiratory and cardio-vascular systems; and we would urge that more space be devoted to these sections and that a little more detail be given. The cardio-respiratory bruit, the reasons for the direction of propagation of bruits, and the extreme importance of the character of the first sound in mitral stenosis could be mentioned with advantage. It is better to speak of a specimen of urine which has been collected aseptically than to talk of a "sterile specimen" in cases of pyuria. An abbreviation of Janet Vaughan's classification of anæmia would be preferable to that which is used. The cremasteric reflex is quite different from the dartos reflex, and in testing the sensation of taste quinine should not be used until after the other substances have been applied.

In a review of the first edition of this book we stated that it was a most useful publication which well fulfilled its purpose, and there is no reason why this statement should be altered. The number of illustrations has been increased, and we have no hesitation in recommending the book to students who are about to commence their clinical work. Our object in criticising the work is to help to make a good book better.

## CLINICAL OBSTETRICS.

No apology is needed for a new text-book such as that on clinical obstetrics by A. L. Mudallair.<sup>2</sup> It is the work of an Indian obstetrician who has had an extensive experience as Professor of Obstetrics at Madras. Throughout the book emphasis is laid on the diagnosis and management of obstetrical difficulties. The methods employed are described in a clear-cut manner and are completely up to date. The author is an uncompromising advocate of conservative measures and his advice is in accord with current Australian teaching. The subject matter is considered along conventional lines, but the value of this text-book lies particularly in its description of the conditions associated with the tropics. The chapters dealing with anæmia, malaria and other tropical diseases and those associated with nutritional deficiency are the most comprehensive in the English language. For those who practise in tropical and subtropical areas these chapters alone make the acquisition of this book worth while. It shows clearly the standards of obstetrics in the Indian Empire, and the publishers deserve praise for the way in which the book has been printed and illustrated.

<sup>1</sup> "Symptoms and Signs in Clinical Medicine: An Introduction to Medical Diagnosis", by E. N. Chamberlain, M.D., M.Sc., F.R.C.P., with a chapter on the examination of sick children by N. B. Capon, M.D., F.R.C.P.; Second Edition; 1935. Bristol: John Wright and Sons Limited. Medium 8vo, pp. 446, with 315 illustrations, of which 19 are in colour. Price: 25s. net.

<sup>2</sup> "Clinical Obstetrics", by A. L. Mudallair, B.A., M.D., F.C.O.G.; 1938. Edinburgh: Oliver and Boyd. Medium 8vo, pp. 520, with illustrations. Price: 27s. net.



## The Medical Journal of Australia

SATURDAY, FEBRUARY 25, 1939.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: Initials of author, surname of author, full title of article, name of journal, volume, full date (month, day and year), number of the first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction, are invited to seek the advice of the Editor.

### ANXIETY STATES.

SIR WALTER LANGDON BROWN, in writing on the psychoneuroses in his new book "Thus We Are Men", has stated his opinion that "quite as many people are ill because they are unhappy as are unhappy because they are ill". This statement, laying stress, as it does, on the relationship between mind and body, may be remembered with advantage by all who are interested in the anxiety states as they occur in general practice. The New South Wales Branch of the British Medical Association showed its wisdom in staging a discussion on this subject; and both the papers by Dr. D. W. H. Arnott and Dr. K. B. Noad and the discussion, published in this issue, demand the careful attention of all medical practitioners. Man, being constituted as he is, has always had to adjust himself to his environment; the new and unexpected have always given him pause if not shock; his nervous system has suffered in the process, and many will argue that he has, generation after generation, transmitted his acquired sensitivity to his offspring. In the olden days man may or may not have been tougher than he is at the present time,

but it is quite certain that the assaults on his nervous system are more violent and more frequent today than they have ever been. It is therefore not surprising that psychoneuroses are rife.

There are one or two aspects of the Sydney discussion on which emphasis should be placed. Little reference was made to the possible hereditary factor in the causation of anxiety states. Many writers hold that such a factor is present. R. G. McInnes, for example, found that of fifty persons suffering anxiety neurosis only twenty-three had parents who had no history of psychosis or neurosis. (McInnes's paper, which was published in *The Proceedings of the Royal Society of Medicine*, Volume XXX, 1937, at page 895, is worthy of careful study; a useful abstract of it appears in the "Medical Annual" of 1938.) There is also something to be said for the views expressed by Dr. T. Dixon Hughes. The idea that a parent's state of mind will influence the offspring is not new. We are told, for instance, that Tristram Shandy's misfortunes began nine months before he ever came into the world. Laurence Sterne makes Tristram Shandy use the following words:

I wish either my father or my mother, or indeed both of them, as they were in duty both equally bound to it, had minded what they were about when they begot me; had they duly consider'd how much depended on what they were then doing;—that not only the production of a rational Being was concerned in it, but that possibly the happy formation and temperature of his body, perhaps his genius and the cast of his mind;—and, for aught they knew to the contrary, even the fortunes of his whole house might take their turn from the humours and dispositions which were then uppermost;—Had they duly weighed and considered all this, and proceeded accordingly,—I am verily persuaded I should have made a quite different figure in the world from that in which the reader is likely to see me.

The problem associated with sentiments of this kind may safely be left to eugenics, and attention should be directed, as Professor W. S. Dawson advised, to child guidance and the training of young children. This, of course, involves the training of parents who often unconsciously store up future trouble for their children. Langdon Brown tells the following tale:

A doctor friend of mine had a small boy of 7 who displayed anger whenever his father kissed his mother, and would then often strike his father. They thought it

amusing, and actually "showed off" this accomplishment of his to me. His father was quite surprised when I warned him of the trouble they were preparing for the future.

The family doctor has more opportunities than most other people of putting parents on the right track, but he must know a little more about the subject than Langdon Brown's doctor friend. By precept, literature and example he should be able to do a great deal in this most fertile field of preventive medicine.

The clinical features of anxiety neurosis were well described at the Sydney meeting. It may be useful, however, to point out in the words of Langdon Brown that psychoneurosis may express itself at one or more of the three levels of the nervous system: at the psychical level by phobias, obsessions and compulsion neuroses; at the sensorimotor level by paralyses, tremors, tics and anaesthesia; at the vegetative level by vasomotor disturbances, palpitation, hyperthyroidism, asthma, acute dilatation of the stomach or glycosuria. This is a formidable list, and lest it may be said by those who will not understand that a group of symptoms is due to a disturbance of the nervous system only and therefore not of such urgent importance, practitioners would do well to remember Dr. Cotter Harvey's statement that depression of the nervous system may lead to some incurable organic disease.

Anxiety states and all forms of psychoneurosis call for diligent study if they are to be thoroughly understood. Practitioners of medicine will find that time given to this work will be well repaid, for, to quote Langdon Brown again: "The doctor of the future will have to come doubly armed—with material aids for material troubles, and with psychotherapy for distress of the spirit."

### Current Comment.

#### ATYPICAL CARCINOMA OF THE LARGE INTESTINE.

THE commonly recognized symptoms of carcinoma of the large intestine are alternating constipation and diarrhoea, the presence of blood in the stools, loss of weight and sometimes the presence of a palpable abdominal tumour. Unfortunately these symptoms are not always manifest, and, if they do

obtrude themselves, they may do so when the growth has made considerable headway and when metastasis has taken place. Sometimes carcinomata of the large bowel give rise to no symptoms at all and are discovered at autopsy. Occasionally they give rise to an abdominal emergency which calls for prompt and accurate diagnosis and equally prompt treatment if the patient's life is to be saved. Jacob Rabinovitch and Max Lederer have recently published the account of an investigation covering forty-five autopsies at which unusual types of carcinoma of the large intestine were observed.<sup>1</sup> This account is of both interest and importance to the clinician.

The ages of the patients in the series ranged from 28 to 82 years, the average age being 55. Twenty-nine patients were aged between 45 and 65 years. Twenty-one were males and 24 were females. The tumours were found in different parts of the large bowel, but 26 of them were situated in the rectosigmoid. The complete lack of symptoms sometimes found is well exemplified by four case histories. In these instances operation was undertaken on account of symptoms of an acute abdominal crisis. In every one of the four cases perforation had occurred and general peritonitis was present. The first patient had had abdominal pain for one week, the second had had acute abdominal pain for two days, the third had had pain and vomiting for three days, and the fourth pain and vomiting for one day. The diagnosis in the first case was rupture of an acutely inflamed appendix; in the second a diagnosis of acute intestinal obstruction was made and the patient died before operation could be undertaken; in the record of the third case no pre-operative diagnosis is stated; the fourth patient was thought to be suffering from an ovarian cyst with a twisted pedicle. In none of the four cases was metastasis found. Several cases are recorded in which the malignant growth perforated into another viscus. Several patients suffered from the annular or constricting type of growth. This did not as a rule form a bulky mass of tissue, but the growth, infiltrating the bowel wall, replaced its several coats. Several of these patients died rather suddenly from acute intestinal obstruction.

Rabinovitch and Lederer make an analysis of the symptoms in their 45 cases. In only five cases in the series was the simultaneous occurrence of diarrhoea and constipation noted. Constipation was noted in 27 cases and diarrhoea in nine. The authors remark that this frequency was probably not greater than that usually noted among presumably normal persons. Pain was present in 42 of the 45 cases, but since in most cases the condition ran an acute course and was complicated by obstruction and peritonitis, the pain, in the authors' opinion, cannot be regarded as symptomatic of carcinoma of the colon. This seems rather obvious, for even in the most classical case of colon carcinoma no symptom alone points to the diagnosis, but must be considered in conjunction with all the other manifestations.

<sup>1</sup> *Archives of Surgery*, December, 1938.



The nausea and vomiting which were present in 17 cases were generally caused by the complications; in 28 cases in which no complicating factors were present there was no nausea or vomiting. Blood was found in the stools of eleven patients. In twenty cases there was no history of loss of weight. Analysis of the symptoms in these cases is thus not very helpful. The only fact that might have been useful in some instances is that many patients had vague symptoms of intestinal disturbance extending over a period of two years or more. Had these vague symptoms been carefully investigated a diagnosis might have been made before the occurrence of the acute episode which terminated in death. The need for the investigation of vague symptoms is the lesson to be learned from this study, for Rabinovitch and Lederer are justified in the statement that in their cases patients with a palpable tumour, loss of weight, bleeding from the rectum, and signs of intestinal obstruction or perforation were at a stage when nothing could be done for them.

#### ASTHMA.

THE Asthma Research Council, which has its head office at King's College, University of London, has issued its report for the year ended October 31, 1938. The report is a pamphlet of 24 pages, but by far the greater part and also the most important part consists of an appendix containing reports of work carried out at asthma research clinics at London hospitals.

Reference is made in more than one hospital contribution to the psychological factor in asthma. At Guy's Hospital patients with rhinorrhoea have been treated with normal saline solution only, and the results are compared with those obtained during the previous year by treatment with solutions of inhalant proteins. Of 35 patients treated with protein, 14 were either cured or manifested considerable improvement, the condition of five was slightly improved, and in 16 instances there was no improvement. Thirty-two patients were treated with normal saline solution, and the corresponding figures were 13, 6 and 13. It is admitted that the group is small, but the conclusion is reached that the psychological element is of even greater importance than was supposed. At Saint Mary's Hospital workers are becoming more and more impressed with the importance of the psychological factor in asthma. Considerable attention is also being paid to the psychological factor at Saint Thomas's Hospital. At this institution a routine investigation is carried out by a medical worker from the department of psychological medicine of the hospital. So far 63 patients have been interviewed, and 31 of them are under the age of sixteen years. It is found that in adults the psychological situation becomes complicated and rigid, because the patients are more set in their ways. In children the commonest psychological factor in the early stages is fear. It is shown

that in only children and eldest children asthma is likely to be influenced by a psychological factor. This factor can often be demonstrated some hours or a day or two before an attack; sometimes this latent period is a regular occurrence. When a psychological factor is present in children the suggestive effect of physical treatment by means of exercises is generally sufficient to deal with the problem.

Among other subjects discussed in the sections of this report are the immunology of hay fever, the use of vaccines in asthma and kataphylaxis. In regard to the last mentioned it is stated that workers at Saint Mary's Hospital are in possession of a method by which they hope to show conclusively the mechanism by which septic foci exert their adverse effect at a distance by transference of kataphylactin without the transference of actual living organisms or of bacterial toxin. Those who are interested in the subject of asthma are invited to apply for a copy of this report, which will be supplied to them free of charge by the Secretary of the Asthma Research Council, King's College, The Strand, London, W.C.2.

#### THE ORGANIZATION OF THE MEDICAL PROFESSION IN TIME OF WAR.

WE are in receipt of a communication from Major-General Rupert M. Downes in regard to the *questionnaire* recently sent out by the Department of Defence to members of the medical profession in Australia. Major-General Downes states that so far approximately 1,900 practitioners have not replied to the communication. He adds that the necessary steps for the organization and medical arrangements for the civil community in war are dependent on a complete, or nearly complete, directory of the profession. It is not practicable to start with the arrangements until more replies have been received to the *questionnaire*. The negligent will please take notice. Those who have replied will be doing a service if they stir their more deliberate brethren into action.

#### THE BRITISH HEART JOURNAL.

THE British Medical Association has undertaken to publish a new journal devoted to diseases of the cardio-vascular system; it is cooperating in this venture with the Cardiac Society of Great Britain and Ireland. The purpose of the new journal will be to gather together contributions at present scattered in general medical periodicals and to provide a medium for the publication of highly technical articles. The two editors, Dr. Maurice Campbell and Dr. Evan Bedford, will be assisted by an editorial board, of which the editor of *The British Medical Journal* is a member. We wish the new journal success.

## Abstracts from Current Medical Literature.

### PATHOLOGY.

#### Primary Reticulum Cell Sarcoma of the Brain.

It is usually considered that tumours do not arise from the microglial elements in the central nervous system, but C. L. Yulle (*Archives of Pathology*, November, 1938) reports a case of cerebral tumour which he regards as a possible instance of such a growth. The patient was fifty years of age and had suffered from disabilities suggestive of cerebral neoplasm for two weeks before admission to hospital. He died twelve days later. At autopsy there was found in the central portion of the right cerebral hemisphere a greyish-pink tumour measuring 2.8 by 2.5 by 2.5 centimetres. This was not sharply circumscribed, but was slightly firmer than the surrounding brain tissue. Microscopic examination revealed that a large area was diffusely infiltrated with large cells. These had irregular round or oval nuclei, varying in diameter from 6 $\mu$  to 10 $\mu$  each. Each nucleus had a heavy chromatin network without prominent nucleoli. Mitotic figures were numerous. Cytoplasm was moderate in amount, irregular in outline, and showed small pseudopodic projections. Many of these cells contained ingested cellular material. The perivascular spaces were densely packed with the cells described, and many cells had invaded the vessel walls. No fibrils or vascular attachments could be seen in phosphotungstic acid-haematoxylin preparations. Hortege-Foots reticulum stain revealed a coarse reticulum closely associated with the cells around the blood vessels; it apparently was not directly related to the tumour cells, as many large groups distant from the vessels contained no reticulum. With gold chloride the tumour cells were indistinct and were without visible processes. Hortege's silver carbonate stain for microglia stained most of the tumour cells well. The author considers that the neoplasm fulfils the morphological criteria of a reticulum cell sarcoma, but does not think there is any evidence that it arose from adventitial histiocytes in the walls of the cerebral blood vessels; it may, he thinks, equally well be derived from the cells of the microglia. This he is inclined to regard as the possible origin of the tumour cells, as many of the cells in silver carbonate preparations presented characters suggesting transitional forms of microglia cells.

#### Lymph Gland Metastases of Sarcoma.

S. WARREN and R. W. MEYER present data of seventeen cases in which metastases of sarcomata were found in lymph glands (*The American*

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instances of benign giant cell tumour the nature of which was determined by reasonably rigid histological criteria, though in only three of these five patients were sections from several different regions of the tumour examined. One case of the series was originally diagnosed as a giant cell tumour, but the material on which the report is based was obtained by aspiration and a note was made at the time of the original examination that the stroma was unusually cellular. The remaining case evoked the remark that "although the diagnosis of giant cell tumour is accepted we cannot say that it was ever benign". In each of these seven instances later histological examinations revealed a picture suggestive of malignancy, though in only five were pulmonary metastases demonstrated radiographically, and in no instance is there any reference to an autopsy report. One patient is still alive almost five years after the detection of malignancy by microscopic examination, and the seventh case was previously reported by Stone and Ewing. The material from this last case has been reviewed by the present authors to refute the contention of Geschechter and Copeland that the original growth was a chondroblastic sarcoma. It has not been possible to determine the tissue elements from which these malignant giant cell tumours are derived, and the authors conclude with the following sentence: "Until better understood the interpretation of giant cell tumour and its malignant evolution must remain in a speculative phase."

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of 16-1 bacteria. Both monoblasts and immature lymphocytes were almost devoid of phagocytic activity. Mature lymphocytes, however, both large and small, were slightly active. The small cells contained an average of 2-6 bacteria, the large 4-4, and the percentage of each type which had taken up the organisms was 1-2 and 7-5 respectively. The so-called leucocytoid lymphocyte from the cases of glandular fever contained an average of 11-4 bacteria, but only 12-0% of these cells had shown phagocytic activity. Of ten plasma cells, none contained any bacteria.

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tapering duct of the seminal vesicle, and that the ampulla of the vas always joins the seminal vesicular duct with a constricted lumen and most frequently at an acute angle, but in about 25% of cases at a right angle. It is because of this method of junction and because of the tapering of the ejaculatory duct that the seminal vesicle always fills before fluid flows from the ejaculatory duct when the vas is injected; and also the seminal vesicle always fills before fluid travels along the vas in retrograde infections. The author finds that a difference in ducts in any one case is uncommon and that diverticula are rare; they occur only in the proximal part of the ejaculatory duct and on the medial and posterior aspects. These diverticula are glandular in structure and join the duct with an extremely fine lumen and are not outpouchings of the lining of the duct. The terminal portions of the duct often show a sharp lateral and posterior curve before opening on the urethral crest. The trigonal muscle ends in a tendon which spreads fan-like over the last few millimetres of the lateral wall of the ejaculatory duct on each side, and the contraction of this muscle, during urination, compresses the terminations of the ducts and prevents any possibility of back flow.

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*rennieri* and the medial large-cell nucleus of the *septum pellucidum* are not necessarily to be interpreted as evidence of cortical connexion because of the involvement of subcortical structures in the lesions. Complete degeneration of the parafascicular nucleus in one case was probably caused by injury to the hypothalamus. No cell changes were found in the paratenial, paraventricular or central nuclei or in the group of nuclei about the posterior commissure, nor was there any definite degeneration in the ventral nucleus of the lateral geniculate body.

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## Abstracts from Current Medical Literature.

### PATHOLOGY.

#### Primary Reticulum Cell Sarcoma of the Brain.

It is usually considered that tumours do not arise from the microglial elements in the central nervous system, but C. L. Yuille (*Archives of Pathology*, November, 1938) reports a case of cerebral tumour which he regards as a possible instance of such a growth. The patient was fifty years of age and had suffered from disabilities suggestive of cerebral neoplasm for two weeks before admission to hospital. He died twelve days later. At autopsy there was found in the central portion of the right cerebral hemisphere a greyish-pink tumour measuring 2.8 by 2.5 by 2.5 centimetres. This was not sharply circumscribed, but was slightly firmer than the surrounding brain tissue. Microscopic examination revealed that a large area was diffusely infiltrated with large cells. These had irregular round or oval nuclei, varying in diameter from  $6\mu$  to  $10\mu$  each. Each nucleus had a heavy chromatin network without prominent nucleoli. Mitotic figures were numerous. Cytoplasm was moderate in amount, irregular in outline, and showed small pseudopodic projections. Many of these cells contained ingested cellular material. The perivascular spaces were densely packed with the cells described, and many cells had invaded the vessel walls. No fibrils or vascular attachments could be seen in phosphotungstic acid-haematoxylin preparations. Hortega-Foots reticulum stain revealed a coarse reticulum closely associated with the cells around the blood vessels; it apparently was not directly related to the tumour cells, as many large groups distant from the vessels contained no reticulum. With gold chloride the tumour cells were indistinct and were without visible processes. Hortega's silver carbonate stain for microglia stained most of the tumour cells well. The author considers that the neoplasm fulfils the morphological criteria of a reticulum cell sarcoma, but does not think there is any evidence that it arose from adventitial histiocytes in the walls of the cerebral blood vessels; it may, he thinks, equally well be derived from the cells of the microglia. This he is inclined to regard as the possible origin of the tumour cells, as many of the cells in silver carbonate preparations presented characters suggesting transitional forms of microglia cells.

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## British Medical Association News.

### SCIENTIFIC.

A MEETING of the New South Wales Branch of the British Medical Association was held at the Robert H. Todd Assembly Hall, British Medical Association House, 135, Macquarie Street, Sydney, on November 30, 1938, Dr. B. T. EBYE, the President, in the chair.

#### Anxiety States in General Practice.

Dr. K. B. NOAD read a paper entitled "Anxiety States in General Practice" (see page 294).

Dr. D. W. H. ARNOTT read a paper entitled "Anxiety States in General Practice" (see page 297).

Dr. E. L. SUSMAN referred to the two factors mentioned by Dr. Noad as playing a part in the production of neuroses: the cinema and the motor car. He said that if those present would turn up the London *Times* of one hundred years ago they would find the same effects attributed to the railway locomotive. If the files of that newspaper of sixty years ago were consulted, it would be found that the Sullivan operas were considered rather naughty, somewhat aphrodisiac, and a fruitful source of the vapours. Dr. Susman did not attach much importance to these factors. He said that there was one thing in modern medicine that was growing and increasing; this was the factor of medico-legal work. If a man had a polo or hunting accident, he seldom developed the train of symptoms that frequently followed industrial accidents. Dr. Susman then spoke of the causes of the distressing complications, considered from the financial aspect, such as anxiety states, hysterical manifestations and frank simulation of disease. He referred first of all to the unfounded fear that injury had been done to the spine or the head, when in fact no such injury had occurred. He said that this fear might be caused (a) by the injudicious advice of neighbours and relatives, (b) by a form of grievance complex, or (c) the fear of the injured worker sustaining an injury at the very time when his value in the labour market was decreasing. In addition there was the factor of lawyer-made disease, and, although Dr. Susman regretted to have to say so, of doctor-made disease. It was in the factor of doctor-made disease that the good general practitioner could be of great service. Dr. Susman pointed out that those present would in no circumstances deliberately infect a surgical wound with a virulent culture; yet something similar was done day after day by lawyers. Legal gentlemen were frequently heard in court affirming that a plaintiff was irrevocably damaged and would never work again. He wondered what could be done to prevent this. In the first place the medical attendant could do much in the early stages to allay the patient's fears, which were analogous to the fears of childhood. The second factor was some form of control of the legal proceedings. Dr. Susman said that the time had come in medico-legal work when the court should have the power of excluding the litigant or plaintiff from the court during the hearing of evidence, at any rate during the hearing of counsel's address. He stressed this legal factor because it was a growing and important one, and because there would have to be some move made, possibly by an association such as the British Medical Association, to try to scotch it. There were several things that struck him about this aspect of medico-legal work; he advocated the introduction of some form of assessor, corresponding to the custom in the Admiralty division. Dr. Susman thought it most unfair that the decision should be placed on the shoulders of a lay judge or jurymen.

Dr. R. C. WINN said that he wished to protest against the over-emphasis that was placed on conscious factors and the relative ignoring of unconscious factors in the production of anxiety states. Such conscious factors as

fear of unemployment, fear of pregnancy, the stress of modern life, all had their effect; but unconscious factors existed also in every case, and were very pronounced in some patients. These could be dealt with to some extent by the general practitioner. Dr. Winn then related an incident in connexion with an orthopedic surgeon of Sydney, who had operated on a child, who afterwards became unconsciously hostile to him. Although the child gave no sign, the surgeon got the child to use his fists on him at every visit; the child was thus treated psychologically. Unconscious factors were very important in the formation of anxiety states. Some of these unconscious impulses were the continuation of hereditary urges which the ancestors of the patient put into actual practice. Dr. Winn had found that every patient had a certain degree of unconscious anxiety, which was expressed in different ways. Psychoanalysts always aimed at freeing patients from the inhibiting effects of these impulses, partly because their unrecognized existence interfered with the progress of analysis. The method adopted was to indicate that these aggressive impulses were natural and universal. When this fact was accepted there was to some extent a reduction in the anxiety state, with greater freedom of expression during psychoanalysis. Such assurance should be of benefit to psychoneurotic patients even when they were unable to undertake psychoanalytical treatment.

PROFESSOR W. S. DAWSON said that it was a matter for congratulation of the speakers that each had invaded the other's territory. He was reminded that there had been a discussion on a somewhat similar subject about a year or two earlier, in London. The reader of the opening paper on that occasion had begun with a quotation, in which it was stated that the increasing pace of modern life and conditions of stress *et cetera* were the cause of the increase in neuroses; he had afterwards informed his listeners that the quotation had been taken from a periodical of about a century earlier. Human beings were always exposed to stress. Most medical practitioners admitted that when they dealt with patients whose resistance to all stresses had been lowered, their reactions were out of all proportion to the stresses. Many of them had in their early years manifested signs of that type of temperament that caused them to react to stimuli that caused no reaction in normal individuals. That should not daunt the psychiatrist, whose function it was to help people to lead the type of life best suited to their personalities. Teachers had a very great responsibility towards their students in this matter. Psychiatrists realized that they could not treat all the people suffering from anxiety neuroses. The general physician was in a very strong position to demonstrate to students the relative importance of the psychological, physical and emotional factors. That was as much as the pre-graduate student could reasonably carry in his mind, and should provide a sound basis for his later work. He could go more deeply into the matter after graduation if he wished to specialize in the treatment of persons with nervous disorders. Professor Dawson said that more might have been said about child guidance and the management of the young child. This was important in the prevention of nervous disorders. He thought that it would be a pity to concentrate too narrowly on fear and on the presence of anxiety in this grade of infantile disorders. Anxiety neuroses were manifested in nervous tension and irritability, as well as in signs of fear. This was easy to imagine in connexion with children brought up in a state of insecurity, even if they were never actually threatened, in homes that were disorderly and devoid of routine, possibly exposed to unhappy conditions. They were very apt to grow up emotionally unstable, and most of them in adult life swelled the ranks of those suffering from anxiety neuroses. Professor Dawson said that possibly modern conditions of life contributed to the formation of that type of personality. The importance of prevention was very great. The psychiatrist dealt with the worst type of case, that in which the emotional signs and minor symptoms of anxiety dated back many years. The cases of anxiety that came before the psychiatrist were seldom of recent development.



DR. CEDRIC SWANTON pointed out that anxiety was something more than fear. Fear was the normal reaction to a danger situation which placed the animal in the most suitable condition for fight or flight, whereas anxiety was that state of panic and paralysis of action induced when neither fight nor flight was possible. In other words, it was the state of affairs induced by an insoluble conflict. This anxiety was intolerable and was the basis of all neuroses. So intolerable was it that something had to be done to escape it, and unconsciously the mechanism of the hysteric, the anxiety hysteric, the obsessional *et cetera* came into play and the neurosis was established.

The importance of this lay in the fact that in treatment the physician could aim at an attempt to give the patient his security by helping him to resolve his environmental difficulties directly or in alleviating them by placing him in the sanctuary of a hospital bed; or, and this was much more difficult, the medical attendant could attempt to alter the patient's mental and emotional attitude towards himself, which would enable him to resolve his own conflict.

Dr. Swanton also welcomed Dr. Susman's remarks about the compensation neuroses, to which, superficially, the same conditions applied. Here the threat to the worker's future security made it difficult for him to let go the apron strings of compensation. Doubting his ability to regain a secure place in the working world, he was not prepared to relinquish the security of compensation.

DR. E. HASLETT FRASER spoke in agreement with Dr. Noad as regards the effect of the cinema and the radio. He considered that either accentuated the fear complex in children, especially in the "horror" dramas over the air. He had seen children listening with open mouth and wide eyes with all their attention fixed on the radio set. Of course this did not so much affect normal children—if there were really any, such—any more than intelligent people would ever dream of buying an article that was advertised over the air, although there were many people who were impressed by such advertising; but it had a deleterious effect on sensitive children. The reason for this was that in listening intently to the radio and in sitting in a darkened auditorium with eyes and ears fixed on the cinema screen, people were really induced into the first stage of waking hypnosis.

Noise was also injurious to the sensitive nervous mechanism. Everyone at some time had felt that "fraying of the nerves" due to noise irritation.

There were one or two points which the speakers had not mentioned. One was the gynecological conditions, such as menstrual disturbances, displacements, ovaritis, and indeed, in his opinion, even tumours were the result of long-continued anxiety states. Another point was the increasingly common disability of impotence in the male and sexual frigidity in the woman. The latter was much more common than usually recognized, because while men came readily enough for consultation as to impotence, women were either ignorant of the condition or more reluctant to speak of it. Impotence might be either very simple or exceedingly difficult to treat. Some cases required a few months, but some might need two or three years.

He thought that the speakers were a trifle optimistic regarding the simplicity of treatment of anxiety neuroses. There was one condition in which he would like to issue a word of warning, and that was in cases of anxiety complicated by obsessional neurosis. There was no such thing as an uncomplicated anxiety neurosis. These patients were exceedingly liable to terminate treatment abruptly in the early stages by committing suicide. He had had four cases in the past twelve years. These were not cases of unsuspected paranoia, as might be imagined, as the patients were aware of the existence and unreality of their compelling urges; but there just suddenly came a moment when the force of the compulsion was too much for their rational control.

For treatment, psychoanalysis was the best method in suitable cases. The general practitioner could do a great deal by early recognition of such cases, as he was usually the first to see the patient, and with his knowledge of the

heredity and environment and family life could help the patient to adjust himself by reasoning, persuasion and suggestion.

DR. T. DIXON HUGHES said that it was his privilege or misfortune frequently to see these patients before they were born; the trouble began in the prenatal period, because the mother was afraid of childbirth. She had an anxiety neurosis to start with and she became a fussy mother; the child did not have a good start in life and developed an anxiety neurosis. Treatment should be instituted before the birth of the child. If the constant harping on maternal mortality could be stopped mothers would approach child-bearing in a much saner attitude of mind. They would not demand so much anaesthesia and so many sedatives; interference during labour would thus be diminished, as well as the cerebral damage to the fetus that resulted from it. Dr. Dixon Hughes said that it was well worth while explaining to the patient why she should not have so much anaesthesia. A little intestinal fortitude was required.

DR. J. H. HALLIDAY referred to Dr. Arnott's recommendation that the medical attendant should insist that patients with anxiety states should get rid of their mannerisms and affectations. Dr. Halliday recalled an interesting lecture in London, in which it was stated that the practitioner who followed this practice at times assumed a very grave responsibility. He had seen patients who had been stripped of those little tricks of personality that made their life comfortable. He had been unable to find that they had been made stable or more comfortable in any way.

DR. C. G. McDONALD said that he did not wish to say very much. He did, however, wish to emphasize one point that had not been brought out. All the discussion on the various apparent causes of anxiety neuroses, in his opinion, led but a little distance. He did not believe that the modern theatre or cinema or wireless or the noise of firearms did any more real harm to the child than to the adult. He considered that modern children were very lucky—much more lucky than he and his contemporaries had been as children, in having these extra educational facilities. Dr. McDonald said that there was a tendency to be old-fashioned and to say that children were not brought up properly and were not disciplined. Dr. McDonald contended that modern children were disciplined; circumstances forced them to be. With that discipline they could withstand the little onslaughts of the "shocker" broadcast over the wireless, and of other things said to damage the personality. Dr. McDonald did not believe that the patient who came to consult a physician about his anxiety neurosis had been upset by those little external circumstances, such as noise, a nagging wife *et cetera*, on which he placed enormous emphasis. The cause lay far deeper. If the physician would only question the patient, he would find a moral cause at the root of every anxiety neurosis. Very frequently the physical symptoms of the emotional response which the patient felt, and which produced the actual physical symptoms, fullness after meals, palpitation *et cetera*, associated with the anxiety neurosis, were produced by the failure on the part of the patient to face some problem in life. If the physician talked to these patients sympathetically, won their confidence and showed sympathy with their distressing sensations, then they would in turn give him their confidence and tell him in plain language what was at the root of their anxiety neurosis. Dr. McDonald said that a patient had come to consult him, complaining of very distressing symptoms, fullness after meals, palpitation and headache that was unrelieved by aspirin and therefore not likely to have an organic origin. By the time he reached Dr. McDonald he was sure that he had a diseased heart and that he was developing a duodenal ulcer. Dr. McDonald had found that the patient had a moral problem, to which he was not facing up. He was a civil servant, receiving a very inadequate salary, and his wife's extravagance was getting him into debt. Instead of telling her in very plain language what she should do, he had shirked his responsibility and then was not able to enjoy his food *et cetera*.

After Dr. McDonald had explained the meaning of his symptoms to him, the patient went back home and told his wife all about the situation. She had said: "Why did you not tell me all this before? I would go through life in poverty with you." She had then made the necessary adjustment and the patient recovered. Dr. McDonald said that in nearly every case of anxiety neurosis there was some difficulty of that or similar type. It was not the actual fear of organic disease that was at the back of the patient's trouble, although advice was sought on account of fears of heart disease, high blood pressure *et cetera*. Unfortunately the moral problem at the base of an anxiety neurosis was not realized early enough. When it had been solved and settled the patient was often left with a firmly fixed idea that he had some serious organic disease. Dr. McDonald said that all physicians realized the difficulty of being sure that the patient's abnormal condition was due to an anxiety neurosis and not to organic disease. This applied particularly to cardiac disease. If a patient felt pain over the precordium and suffered from palpitation on effort, and if he told his physician that he became short of breath on taking exercise and had more pain and palpitation, it was very difficult to determine whether he had a lesion of the coronary arteries or an anxiety neurosis. Similar remarks applied to other types of anxiety neuroses: whether they were referred to the spine, the abdomen or any other part of the body. Every physician, whether in general practice or consultant practice, ought to have as perfect a knowledge as possible, not only of physical signs, but of symptoms. If medical practitioners spent more time talking to their patients they would appreciate more the enormous importance of symptoms.

Dr. Susman had made two statements, with one of which Dr. McDonald could not agree. This was Dr. Susman's attack on lawyers. There was no real justification for blaming a barrister who made the most of his client's case and placed emphasis on his suffering; the lawyer on the other side would not hesitate to depreciate it all, and might even suggest that the patient was a malingerer. The judge could then make a decision. Dr. Susman's other point, with which Dr. McDonald did agree, was his remark with regard to head injuries. The surgeons could be of enormous help in this connexion. The modern tendency was to regard symptoms following head injuries as being in almost every instance organic. There was much talk about the condition of the brain; and there was much talk about the late effect of injuries to the brain. Anyone who received a small tap on the head thought he was a candidate for a lunatic asylum, or that he had a "clot" that would cause him to drop dead at any moment. After a comparatively trivial head injury any man might suffer from headache, weakness, dizziness *et cetera*. Dr. McDonald believed that these symptoms were nearly always due to an anxiety neurosis. The patient should be reassured early. Such reassurance would go a long way towards bringing him back to health.

DR. COTTER HARVEY said that he wished to bring the field of discussion into the realm of organic disease. It was a well-known fact that organic and functional disease might be correlated and that an anxiety neurosis might mask underlying disease. Dr. Harvey had been struck with the number of young people who consulted him and who had at one time or another been treated for "nervous breakdown" in their early twenties. By the time he saw them they were all suffering from pulmonary tuberculosis, very often in an advanced stage. Dr. Harvey had little doubt that the so-called breakdowns were due to the insidious work of toxins produced by the tubercle bacillus. People who were under stresses and who had domestic and environmental difficulties might thereby be precipitated into gross organic disease. It was well for the general practitioner to remember that such patients might drift from their nervous breakdowns into pulmonary tuberculosis, diabetes, nephritis *et cetera*. There was a great responsibility on the general practitioner to see that such patients did not remain unrelieved of their nervous disorders. Not only might the nervous system

be suffering, but the depression of the nervous system might lead to some incurable organic disease.

Dr. Noad, in reply, thanked those who had contributed to the discussion, which he thought had been instructive and illuminating.

Dr. Arnott, in reply, also thanked those who had taken part in the discussion. He said that he thought he had pointed out the part played by unconscious factors in anxiety states; not only were they important, but the whole life of the patient, even influences in early childhood, was important. All these factors had to be assessed. Dr. Arnott was surprised that the psychoanalysts present had not brought up the motive of sex. Freud had originally postulated that all anxiety states were the result of unsatisfied sexual urges, but was not quite so dogmatic now. With regard to the possibility of bad results following the reduction of affected tricks and mannerisms of patients with anxiety neuroses, Dr. Arnott said that he thought the danger was not great if the process was carried out slowly. The restoration of naturalness had a very beneficial effect upon the personality. Dr. Arnott urged those present to try it on themselves. Life was very much easier if one was not always straining after effect. Dr. Arnott agreed with Dr. McDonald that the cause of an anxiety neurosis was often moral, the result of subconscious conflict of the patient's aggressive tendencies with social demands.

#### NOMINATIONS AND ELECTIONS.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

- Vickery, Jan Firth, M.B., B.S., 1939 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.
- Edwards, Margaret Jean, M.B., B.S., 1939 (Univ. Sydney), Sydney Hospital, Sydney.
- Hipsley, Eben Hamilton, M.B., B.S., 1939 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.
- Watson, Douglas Godfrey, M.B., B.S., 1939 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.
- Burniston, George Garrett, M.B., B.S., 1939 (Univ. Sydney), Hornsby and District Hospital, Hornsby.

The undermentioned have been elected members of the New South Wales Branch of the British Medical Association:

- McDonald, James Main, M.B., B.S., 1938 (Univ. Sydney), Prince Henry Hospital, Little Bay.
- Bulteau, Volney Gordon, M.B., B.S., 1939 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.
- Goulston, Stanley Jack Marcus, M.B., B.S., 1939 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.
- Jeffery, Leslie Philip Henry, M.B., B.S., 1939 (Univ. Sydney), Parramatta District Hospital, Parramatta.
- Pearson, Alva Thomas, M.B., B.S., 1938 (Univ. Sydney), 20, Paton Street, Kingsford.
- Rosen, Eric Nathan, M.B., B.S., 1931 (Univ. Sydney), 22, Walker Street, Haberfield.
- Connolly, Edward Philemon, M.B., B.S., 1930 (Univ. Sydney), F.R.C.S. (England), 1939, 63, Fairlight Street, Manly.
- Cumpston, Alan George, M.B., B.S., 1938 (Univ. Sydney), Sydney Hospital, Sydney.



## Medical Societies.

### MELBOURNE PÆDIATRIC SOCIETY.

A MEETING of the Melbourne Pædiatric Society was held at the Children's Hospital, Carlton, on September 14, 1938, Dr. COLIN MACDONALD, the President, in the chair. A report of the discussion on the paper by Dr. Stanley Williams, read at this meeting, was published in the issue of January 28, 1939.

#### Lymphangioma of the Tongue.

Dr. G. HODGES, at the request of Dr. Paul Jones, showed a girl, aged seven years, suffering from a lymphangiomatous condition of the tongue. Dr. Hodges said that the mother had stated that shortly after birth the baby had salivated so much that she could not take the breast milk properly. The doctor in attendance had found two dark purple areas on the floor of the mouth on either side under the tongue, and had operated on them when the baby was three weeks old. The result was satisfactory, and the baby continued to be breast fed; but trouble began again when she was about a year old. She had repeatedly had attacks of swelling of the tongue, which began with multiple, raised, small, clear cystic bubbles all over the tongue, including the dorsum; some of the little cysts would later turn red, then purple, and then fade away, and the tongue would become relatively normal in appearance. The attacks in the early years generally lasted for a few days only and seemed to be precipitated by colds. The present attack, however, had lasted for six months without abatement. The affection had been particularly severe when the child was three years of age; there had been great swelling of the tongue, lips and neck, and nasal feeding had been found necessary. Dr. Hodges said that the whole surface of the tongue was covered with minute cysts containing clear fluid. There had been hemorrhage into some of the cysts, and there were a few red raised papillomatous areas. The surface bled easily if touched. In some places there were normal areas. The cervical glands were enlarged on both sides. Dr. Hodges remarked that as the process was not localized, it was not amenable to local removal. The tongue was not causing much discomfort from its size, for it was only slightly enlarged; but there were some excess of salivation and pain when the child took common salt or hot foods by mouth. Dr. Hodges invited suggestions as to any surgical procedure that might benefit the patient, and asked for opinions on the possibilities of radium or diathermy treatment. It had also occurred to her that it might be better to leave the tongue alone in case energetic treatment increased the activity of the process.

Dr. R. L. FORSYTH said that he regarded the condition as congenital, but thought that it should be recognized that the enlargement of the cervical glands and the septic condition of the tongue were not congenital. He understood that Dr. H. Douglas Stephens had removed a section for examination when the patient was very young, and it would be of interest to know the result of that examination. Dr. Forsyth said he was at a loss to explain the pathology of the condition; but he advised that the mouth should be kept clean and that the use of a little radium in treatment should be considered, provided that an expert in radium treatment approved and that it was used cautiously.

Dr. PAUL JONES said that he had not seen anything like the lesion before. The essential features were the presence of cystic vesicles, some being clear and some containing small hemorrhages. He was satisfied that the pathology was different from that of lymphangiomata found in the neck, and he did not know what to suggest. It was a distressing condition to the child on account of the excessive salivation and of the tendency for the cysts to burst and bleed; at times she spat blood, and was very uncomfortable.

Dr. J. G. WHITAKER thought that the help of a radio-therapist should be sought.

#### Scleroderma.

Dr. E. E. PRICE showed two male patients suffering from scleroderma. The first, a male, aged three and a half years, had first attended at the hospital on August 19, 1938, complaining of a limp, and the possibility of infection with poliomyelitis had had to be considered. In May, 1938, he had complained of soreness in the right leg on a number of mornings, and he had limped until the soreness passed off early in the day. In July, 1938, after a fall, the disability increased, and it had persisted since that time. When Dr. Price examined the boy he had found present a peculiar subcutaneous thickening, which pitted slightly on pressure, involving the right lower extremity in the medial part of the foot and sole, the medial aspect of the calf and knee and the thigh, following the sartorius muscle to the level of the anterior superior iliac spine. The remaining areas of the limb were affected to a much smaller extent, but probably were not normal. The skin that was definitely involved was thin, atrophic and shiny and of an ivory colour, with the exception of that over the upper part of the thigh, which seemed rather harder and was pigmented. The muscles of the sole and calf of the affected limb were considered to be more indurated than those of the other leg. The lymph glands of the inguinal and external iliac groups of the right limb were notably enlarged and firm. Wasting amounting to 2.5 centimetres (one inch) in the circumferential measurement over the middle part of the thigh and to 1.25 centimetres (half an inch) in the calf was readily observable; but there was no shortening, muscle weakness or disturbance of normal sensation. The joint movements were restricted slightly in the knee and foot, but there was no pain. In other respects the child appeared to be perfectly healthy. The spleen, liver, and lymphatic glands, other than those to which reference had been made, were not enlarged. Skiagrams of the pelvis and femur revealed no abnormality. The blood serum failed to react to the Wassermann test; the blood sedimentation index was 5, the curve being flat. The hemoglobin value was estimated at 90%. The erythrocytes numbered 5,990,000 and the leucocytes 17,550 per cubic millimetre, and in the blood film no abnormal cells were found; but there was a relative lymphocytosis, lymphocytes making up 70% of the leucocytes observed. A gland and a portion of skin had been removed for microscopic examination. The inner layer of the epithelium was deeper than usual, and the connective tissue was very dense. The lymphoid gland appeared hyperplastic, the reticular endothelium being very prominent in places, but there was no evidence of lymph stasis.

The second patient shown by Dr. Price was a boy, aged ten and a half years, who had come under observation on May 13, 1937. When he was only one year of age he had fallen on a piece of jagged glass, which had inflicted a triangular cut on the right side of the forehead. This had appeared to heal well at the time, but after the passage of two years gradually progressed, and scarring had become noticeable over the right side of the forehead. By the time the boy came under Dr. Price's attention the thickening extended from the inner canthus of the right eye up into the scalp towards the vertex, mapping out fairly well the distribution of the supraorbital and supratrochlear nerves. The area was thinned, papery and pigmented, and the colour was unevenly brownish-yellow. The hair was lost over the affected area, but the integuments were not particularly adherent to the skull. The patient's blood serum had failed to react to the Wassermann test, and a skiagram of the skull had been prepared, but revealed no abnormality. The patient had been treated with iodolysin for two months without obvious improvement. He had come under Dr. Price's notice again on August 31, 1938. At that time there was a faintly distinguishable thinning and whitening of the skin on the right side of the nose.

Dr. Price said that scleroderma was defined by Ormsby as a disorder characterized by induration of the skin, in patches or in diffuse areas, frequently associated with atrophy and pigmentation. Two types were described, the diffuse and the circumscribed; but the two types could coexist.

With reference to the diffuse type, Dr. Price said that the disease could begin insidiously anywhere on the body. It spread slowly as a rule, but sometimes more rapidly, to cover large areas of the body. There were usually no subjective symptoms beyond a sense of stiffness, which, however, might become extreme, affecting joints and interfering with mastication, breathing or the function of the limbs. An early succulent and a late atrophic stage could be differentiated. In the earlier phase the appearances were not constant; but they usually included infiltration of the skin, which became pale or ivory-coloured and somewhat fixed to the underlying structures, oedema, which might amount to a stiff pitting oedema, and erythema. In the atrophic stage the skin became thinner, harder and more bound down; the joints became fixed in that manner, and ulceration might occur over bony prominences. The hair was likely to fall out, and pigmentation, interspersed with loss of normal pigmentation, might appear. Some dulling of sensation might become detectable. Dr. Price added that the course in children, though more acute, was less likely to lead to severe atrophy. In infants patches might appear and dissolve. The course was variable: while in some cases spontaneous recovery occurred, in others the progress was only arrested, to be lit up by intercurrent infection until it terminated in severe atrophy.

Dr. Price said that the two varieties of the circumscribed type of scleroderma were known as the "rounded" and the "band form". The rounded variety consisted of single or multiple rounded patches surrounded by a violaceous area of congested blood vessels. The band form occupied ribbon-shaped areas, particularly on the face and forehead or in the longitudinal axis of a limb. The direct cause of any form of the disease was unknown. It might occur at any age, and no change had been observed in the blood chemistry. It had been found to follow various specific infections, such as scarlet fever, diphtheria or influenza, or to follow exposure to cold or to the heat of the sun's rays. Syphilis or trauma might be regarded as a contributing cause in some cases. Some connexion with the ductless glands had been said to exist, but this was indefinite and confused. Osler had compared scleroderma to myxoedema, and, by analogy, had inferred a hormonal origin. Most authors regarded scleroderma as a trophoneurosis. Hektoen had found a great hyperplasia of the intercellular substance in the corium, and obliterative thickening of the vessels, with perivascular cell infiltration and atrophy of the epidermis, hair follicles and sweat glands.

Dr. Price added that treatment was most unsatisfactory. Local irradiation of any wave-length did not seem of value. Massage and electrotherapy were equally futile. Ointments of various sorts had been advocated, the only common basis of which seemed to be lard. Thiosinamin, salol and iodolysin had their adherents, but were not of much benefit. Ganglionectomy had been practised occasionally; in one case Dr. Price had not been successful in obtaining a permanently satisfactory result. He added that almost every variety of gland preparation had been used. Roques, in 1910, had reported successful results with thyroid extract in 63% of cases. Extracts of suprarenal glands, pituitary, ovary, testis and pancreas had been used without striking benefit. Dr. Price said that he had shown the two patients that night to ask for opinion on diagnosis, prognosis and treatment. They appeared to him to be examples of the band form of circumscribed scleroderma, but with atypical features. He directed attention to the unmistakable involvement of lymphatic glands in the case of the younger boy as a feature to which he had found no reference in the literature he had consulted.

Dr. COLIN ROSS remarked on certain similarities to chronic dermal pellagra, which had suggested to him the possibility of successful treatment with nicotinic acid. In the case of pellagra it had been found that, though nicotinic acid failed to improve the patient's condition when administered orally, it produced favourable results when injected hypodermically. If Dr. Price could obtain some nicotinic acid he might care to try it on the patients he had shown that night.

Dr. J. B. COLQUHOUN referred to the possibility of the condition's extending beyond the skin and involving the muscular tissue. He recalled two instances in which patients with scleroderma developed flat feet and could not rise on their toes. The calf muscles had a consistency unlike that of normal muscle tissue.

Dr. WILFRED FORSTER summarized the clinical features of the case of an elderly female patient with scleroderma whom he had attended. Both upper limbs had eventually become fixed as in gross rheumatoid arthritis. The tightening and thickening of the skin had resulted in horrible deformities, and multiple foci of local malignant disease resembling rodent ulcers had developed.

Dr. H. BOYD GRAHAM said that he had had the opportunity of examining the younger patient with Dr. Price in the out-patients' department, and at that time had expressed the opinion that a condition of lymphatic stasis had to be considered as an alternative to the diagnosis of scleroderma. The absence of any swelling or affection of the foot, and the fact that the limb was actually smaller in the circumference of the calf and the thigh than the other limb, which was normal, made it impossible to sustain the diagnosis of lymphatic obstruction. He did, however, still doubt whether the condition was a true scleroderma, because he was convinced that the tissues underlying the skin, even including the muscles, were probably involved. He thought that it might be worth while making a small incision somewhere in the affected area, with the object of removing some deeper tissue for microscopic examination.

Dr. Price, in reply, said that he had hoped to hear something of the results of sympathectomy from some of the members. He was also seeking information concerning the relationship of the lymphatic system to the scleroderma. It was his intention to give both the patients thyroid treatment, and in the case of the smaller boy to subject the lymph glands to deep X ray therapy.

#### Suppurative Sialiectasis.

Dr. RUSSELL HOWARD showed a boy, aged eight years, suffering from suppurative sialiectasis. When six years of age the child had developed bilateral parotitis, and had been in bed for two weeks. The parotitis had subsided on the left side, but not completely on the right side, and he had been brought to the Children's Hospital because of the persistence of the swelling. When he was examined on November 23, 1936, there was a small hard lump in the region of the accessory of the right parotid gland, and in the main portion of the gland there was diffuse swelling in a mild degree. The orifice of the parotid duct was inflamed and pus could be expressed from it. Dr. Howard said that the swelling had persisted until on April 29, 1937, the orifice of the duct had been slit open with a tenotome. The swelling had then subsided slowly, and the subsequent history had been of stenosis of the duct orifice with constant discharge of pus therefrom. The duct was not sufficiently blocked to stop excretion completely, but the orifice was so small as to render impossible its catheterization with anything larger than silkworm gut. The duct had been dilated on two occasions under general anaesthesia, but contraction of the opening occurred with great speed on account of the resilience of the stricture. A vaccine had been prepared from a pure growth of *Staphylococcus aureus* obtained by culture of pus from the duct on April 21, 1938. A series of hypodermic injections of the vaccine had been made, but as there had been no diminution of the discharge that form of treatment had been discontinued. On August 25, 1938, by means of a sialogram, gross sialiectasis of the right parotid gland had been revealed. Dr. Howard contrasted the sialogram with the normal one of the left parotid gland. He stated that the condition was being treated by intermittent dilatation of the duct orifice, in the hope that adequate drainage would be established. The condition was one of suppuration in the parotid gland combined with sialiectasis.

Dr. WILFRED FORSTER said that the patient's disorder was one of several examples of repeated swellings of a parotid gland that he had encountered in the out-patient depart-



ment. He had thought of some possible relationship with angioneurotic oedema. In the case of Dr. Howard's patient he had wondered whether the suppuration was related to the energetic treatment, and had thought also of the condition eventually coming to the surface and producing a parotid fistula. Dr. Howard might perhaps consider avulsion of the auriculo-temporal nerve in order to diminish parotid secretion.

Dr. E. E. PRICE remarked that the usual examples of recurrent parotid swelling were not associated with obstruction, but rather with a patulous state of the duct, and that the secretion was usually mucopurulent rather than purulent. He thought, therefore, that the underlying condition was originally mucopurulent parotitis, and that the discharge of pus was related to the stenosis. It would be a relatively simple procedure to avulse the auriculo-temporal nerve. This procedure should successfully prevent physiological secretion, but was not likely to do the dilated parts of the gland any good. He had had experience of the use of the deep X ray therapy in one case, but it had not resulted in a cure.

Dr. Howard, in reply, said that as the sialogram of the opposite side revealed no abnormality, he thought that congenital abnormalities could be eliminated from the diagnosis, and that the original lesion appeared to be mild suppurative parotitis. The stricture formation could be attributed to the operation on the duct orifice, and the sialectasis had resulted from the stricture to a large extent. In treatment attention had to be directed first to the stenosis of the duct. The strictured area could not be excised without the formation of external parotid duct fistula. It would be difficult to arrange a cannula that would not slip back into the gland or fall forward into the mouth. He was left with the conviction that the method of intermittent dilatation had to be adopted and continued. With regard to the infection in the gland, Dr. Howard considered that there were only two ways of dealing with it: one was excision, which was impracticable in the case of a parotid gland, and the other was drainage. Drainage along the duct through the mouth was the method of choice, and could be carried out only by dilatation of the duct. In view of the failure of an autogenous vaccine as a direct measure against the infecting organism, he suggested that "Uleron", the sulphanilamide preparation recommended particularly for use against staphylococci, might be worthy of a trial. In conclusion, Dr. Howard said that he thought that avulsion of the auriculo-temporal nerve was contraindicated, as it would merely produce cessation of secretion of the gland and could not possibly be expected to have any effect on the pyogenic membrane that must line the sialectatic cavities.

#### Familial Haemolytic Jaundice.

Dr. A. P. DERHAM and Dr. IAN WOOD showed a male baby, aged one month, suffering from familial haemolytic jaundice. The baby had weighed 3.2 kilograms (seven pounds four ounces) at birth, and had appeared to be in good health until, after circumcision on the twelfth day, pallor had commenced and had increased from that time. The baby's mother was a member of a family known to be subject to hemolytic jaundice, and she had herself been subjected to splenectomy in 1920. The baby was very pale, but there was no icteric tinge of the skin or conjunctivae. The spleen was, however, palpable and soft. The state of the blood had been investigated. It had been found that the hemoglobin value was 46%, the erythrocytes numbered 2,400,000, and the leucocytes 17,000 per cubic millimetre; the percentage of reticulocytes had been estimated at 16. In the blood film some normoblasts had been noticed, and anisocytosis and polychromasia were present. The halometer reading indicated that the average diameter of the blood cells was  $6.6\mu$ , the normal reading being taken as  $7.2\mu$ . Spherocytosis was present, since though the mean corpuscular volume was within normal limits, the mean corpuscular diameter was reduced. It had also been established that the erythrocytes were unduly fragile; hemolysis commenced in 0.55% saline solution, and was complete in 0.40% saline solution.

The blood serum had failed to react to the Wassermann test, but had reacted positively to the Fouchet test. A delayed direct Van den Bergh reaction had been obtained. The treatment of the anemic condition had been in progress for one week at the time of the meeting. A mixture containing ferrous sulphate had been given, the baby receiving 0.2 gramme (three grains) twice a day, and an injection of two cubic centimetres of "Campolon" with vitamin B<sub>12</sub> had been made under the skin. As the hemoglobin content of the blood had fallen to 35% and the red erythrocytes to 1,800,000 after removal of approximately ten cubic centimetres of blood for the various investigations, 155 cubic centimetres (five and a half ounces) of blood had been transfused from the father to the baby on September 12. On September 14 the hemoglobin value had risen to 93%.

The opportunity had been taken to investigate the blood of the baby's mother on September 13. She was aged twenty-seven years, and her spleen had been removed at the age of nine years. The hemoglobin value was estimated at 113%; the erythrocytes numbered 5,160,000 and the leucocytes 17,000 per cubic millimetre, the reticulocytes being less than 1%. The corpuscular fragility was increased, hemolysis beginning at 0.55% and being complete at 0.425% solution of sodium chloride.

Dr. H. BOYD GRAHAM said that he recalled the investigations carried out on the baby's mother, and the splenectomy. He had also had clinical experience of the occurrence of familial haemolytic jaundice in a number of the relatives. As there was no possible doubt of the diagnosis, and as splenectomy had proved so satisfactory to the members of the previous generation of the same family, he advised that the baby should be subjected to splenectomy at an early age—in fact, as soon as a surgeon could be obtained who would be prepared to expose the baby to the risk of operation.

Dr. J. G. WHITAKER said that he was sure that the surgeons would be very glad to cooperate with the physicians in the treatment of the baby.

Dr. RUSSELL HOWARD said that the baby was likely to get attacks of aplasia, and that there was a definite risk associated with splenectomy. It should also be remembered that there was an increased liability to infection following splenectomy, similar in many respects to that associated with scurvy and pink disease, which would lead to a post-operative risk while the baby remained in hospital. He thought that the baby should be kept away from the surgeons for a little longer. It should also be remembered that in well-established cases of haemolytic splenomegaly, splenectomy did not actually cure the patients; the erythrocytes remained unduly fragile.

Dr. A. P. DERHAM said that one of the relatives, when approached for information bearing on the familial incidence of the condition, had refused to assist, and had appeared to be bored to tears, probably as a result of the inquiries made by Dr. S. Cowen and others in 1922 and since. On account of the family attitude, and because of the loss of another baby at a tender age, he thought that an early operation on the baby shown that night was the correct line of action in spite of the risk.

#### Nutritional Anæmia.

Dr. Derham and Dr. Wood also showed a female baby, suffering from nutritional anemia, who had been admitted to the Children's Hospital on February 7, 1938, at the age of nine months. The circumstances surrounding the baby's birth were stressed as aetiological factors predisposing to the anemic condition. The birth was a month premature; the mother was unmarried and only fifteen years of age. She had had poor food and much worry, and had suffered from toxic eclampsia. The baby had been fed naturally to the age of three months, and had then received a mixture of milk and water and sugar, on which she had appeared to thrive until she was six months of age. It had then been found difficult to administer the food, and during the three months prior to her admission to hospital the baby had become very pale and had not gained much weight. On examination it was found that a severe degree of hypo-

With reference to the diffuse type, Dr. Price said that the disease could begin insidiously anywhere on the body. It spread slowly as a rule, but sometimes more rapidly, to cover large areas of the body. There were usually no subjective symptoms beyond a sense of stiffness, which, however, might become extreme, affecting joints and interfering with mastication, breathing or the function of the limbs. An early succulent and a late atrophic stage could be differentiated. In the earlier phase the appearances were not constant; but they usually included infiltration of the skin, which became pale or ivory-coloured and somewhat fixed to the underlying structures, oedema, which might amount to a stiff pitting oedema, and erythema. In the atrophic stage the skin became thinner, harder and more bound down; the joints became fixed in that manner, and ulceration might occur over bony prominences. The hair was likely to fall out, and pigmentation, interspersed with loss of normal pigmentation, might appear. Some dulling of sensation might become detectable. Dr. Price added that the course in children, though more acute, was less likely to lead to severe atrophy. In infants patches might appear and dissolve. The course was variable: while in some cases spontaneous recovery occurred, in others the progress was only arrested, to be lit up by intercurrent infection until it terminated in severe atrophy.

Dr. Price said that the two varieties of the circumscribed type of scleroderma were known as the "rounded" and the "band form". The rounded variety consisted of single or multiple rounded patches surrounded by a violaceous area of congested blood vessels. The band form occupied ribbon-shaped areas, particularly on the face and forehead or in the longitudinal axis of a limb. The direct cause of any form of the disease was unknown. It might occur at any age, and no change had been observed in the blood chemistry. It had been found to follow various specific infections, such as scarlet fever, diphtheria or influenza, or to follow exposure to cold or to the heat of the sun's rays. Syphilis or trauma might be regarded as a contributing cause in some cases. Some connexion with the ductless glands had been said to exist, but this was indefinite and confused. Osler had compared scleroderma to myxodema, and, by analogy, had inferred a hormonal origin. Most authors regarded scleroderma as a trophoneurosis. Hektoen had found a great hyperplasia of the intercellular substance in the corium, and obliterative thickening of the vessels, with perivascular cell infiltration and atrophy of the epidermis, hair follicles and sweat glands.

Dr. Price added that treatment was most unsatisfactory. Local irradiation of any wave-length did not seem of value. Massage and electrotherapy were equally futile. Ointments of various sorts had been advocated, the only common basis of which seemed to be lard. Thiosinamin, salol and iodolysin had their adherents, but were not of much benefit. Ganglionectomy had been practised occasionally; in one case Dr. Price had not been successful in obtaining a permanently satisfactory result. He added that almost every variety of gland preparation had been used. Roques, in 1910, had reported successful results with thyroid extract in 63% of cases. Extracts of suprarenal glands, pituitary, ovary, testis and pancreas had been used without striking benefit. Dr. Price said that he had shown the two patients that night to ask for opinion on diagnosis, prognosis and treatment. They appeared to him to be examples of the band form of circumscribed scleroderma, but with atypical features. He directed attention to the unmistakable involvement of lymphatic glands in the case of the younger boy as a feature to which he had found no reference in the literature he had consulted.

Dr. COLIN ROSS remarked on certain similarities to chronic dermal pellagra, which had suggested to him the possibility of successful treatment with nicotinic acid. In the case of pellagra it had been found that, though nicotinic acid failed to improve the patient's condition when administered orally, it produced favourable results when injected hypodermically. If Dr. Price could obtain some nicotinic acid he might care to try it on the patients he had shown that night.

Dr. J. B. COLQUHOUN referred to the possibility of the condition's extending beyond the skin and involving the muscular tissue. He recalled two instances in which patients with scleroderma developed flat feet and could not rise on their toes. The calf muscles had a consistency unlike that of normal muscle tissue.

Dr. WILFRED FORSTER summarized the clinical features of the case of an elderly female patient with scleroderma whom he had attended. Both upper limbs had eventually become fixed as in gross rheumatoid arthritis. The tightening and thickening of the skin had resulted in horrible deformities, and multiple foci of local malignant disease resembling rodent ulcers had developed.

Dr. H. BOYD GRAHAM said that he had had the opportunity of examining the younger patient with Dr. Price in the out-patients' department, and at that time had expressed the opinion that a condition of lymphatic stasis had to be considered as an alternative to the diagnosis of scleroderma. The absence of any swelling or affection of the foot, and the fact that the limb was actually smaller in the circumference of the calf and the thigh than the other limb, which was normal, made it impossible to sustain the diagnosis of lymphatic obstruction. He did, however, still doubt whether the condition was a true scleroderma, because he was convinced that the tissues underlying the skin, even including the muscles, were probably involved. He thought that it might be worth while making a small incision somewhere in the affected area, with the object of removing some deeper tissue for microscopic examination.

Dr. Price, in reply, said that he had hoped to hear something of the results of sympathectomy from some of the members. He was also seeking information concerning the relationship of the lymphatic system to the scleroderma. It was his intention to give both the patients thyroid treatment, and in the case of the smaller boy to subject the lymph glands to deep X ray therapy.

#### Suppurative Sialactasis.

Dr. RUSSELL HOWARD showed a boy, aged eight years, suffering from suppurative sialactasis. When six years of age the child had developed bilateral parotitis, and had been in bed for two weeks. The parotitis had subsided on the left side, but not completely on the right side, and he had been brought to the Children's Hospital because of the persistence of the swelling. When he was examined on November 23, 1936, there was a small hard lump in the region of the accessory of the right parotid gland, and in the main portion of the gland there was diffuse swelling in a mild degree. The orifice of the parotid duct was inflamed and pus could be expressed from it. Dr. Howard said that the swelling had persisted until on April 29, 1937, the orifice of the duct had been slit open with a tenotome. The swelling had then subsided slowly, and the subsequent history had been of stenosis of the duct orifice with constant discharge of pus therefrom. The duct was not sufficiently blocked to stop excretion completely, but the orifice was so small as to render impossible its catheterization with anything larger than silkworm gut. The duct had been dilated on two occasions under general anaesthesia, but contraction of the opening occurred with great speed on account of the resilience of the stricture. A vaccine had been prepared from a pure growth of *Staphylococcus aureus* obtained by culture of pus from the duct on April 21, 1938. A series of hypodermic injections of the vaccine had been made, but as there had been no diminution of the discharge that form of treatment had been discontinued. On August 25, 1938, by means of a sialogram, gross sialactasis of the right parotid gland had been revealed. Dr. Howard contrasted the sialogram with the normal one of the left parotid gland. He stated that the condition was being treated by intermittent dilatation of the duct orifice, in the hope that adequate drainage would be established. The condition was one of suppurative sialactasis combined with sialactasis.

Dr. WILFRED FORSTER said that the patient's disorder was one of several examples of repeated swellings of a parotid gland that he had encountered in the out-patient depart-



ment. He had thought of some possible relationship with angioneurotic oedema. In the case of Dr. Howard's patient he had wondered whether the suppuration was related to the energetic treatment, and had thought also of the condition eventually coming to the surface and producing a parotid fistula. Dr. Howard might perhaps consider avulsion of the auriculo-temporal nerve in order to diminish parotid secretion.

Dr. E. E. PRICE remarked that the usual examples of recurrent parotid swelling were not associated with obstruction, but rather with a patulous state of the duct, and that the secretion was usually mucopurulent rather than purulent. He thought, therefore, that the underlying condition was originally mucopurulent parotitis, and that the discharge of pus was related to the stenosis. It would be a relatively simple procedure to avulse the auriculo-temporal nerve. This procedure should successfully prevent physiological secretion, but was not likely to do the dilated parts of the gland any good. He had had experience of the use of the deep X ray therapy in one case, but it had not resulted in a cure.

Dr. Howard, in reply, said that as the sialogram of the opposite side revealed no abnormality, he thought that congenital abnormalities could be eliminated from the diagnosis, and that the original lesion appeared to be mild suppurative parotitis. The stricture formation could be attributed to the operation on the duct orifice, and the sialiectasis had resulted from the stricture to a large extent. In treatment attention had to be directed first to the stenosis of the duct. The strictured area could not be excised without the formation of external parotid duct fistula. It would be difficult to arrange a cannula that would not slip back into the gland or fall forward into the mouth. He was left with the conviction that the method of intermittent dilatation had to be adopted and continued. With regard to the infection in the gland, Dr. Howard considered that there were only two ways of dealing with it: one was excision, which was impracticable in the case of a parotid gland, and the other was drainage. Drainage along the duct through the mouth was the method of choice, and could be carried out only by dilatation of the duct. In view of the failure of an autogenous vaccine as a direct measure against the infecting organism, he suggested that "Uleron", the sulphanilamide preparation recommended particularly for use against staphylococci, might be worthy of a trial. In conclusion, Dr. Howard said that he thought that avulsion of the auriculo-temporal nerve was contraindicated, as it would merely produce cessation of secretion of the gland and could not possibly be expected to have any effect on the pyogenic membrane that must line the sialiectatic cavities.

#### Familial Haemolytic Jaundice.

Dr. A. P. DERHAM and Dr. IAN WOOD showed a male baby, aged one month, suffering from familial haemolytic jaundice. The baby had weighed 3.2 kilograms (seven pounds four ounces) at birth, and had appeared to be in good health until, after circumcision on the twelfth day, pallor had commenced and had increased from that time. The baby's mother was a member of a family known to be subject to haemolytic jaundice, and she had herself been subjected to splenectomy in 1920. The baby was very pale, but there was no icteric tinge of the skin or conjunctiva. The spleen was, however, palpable and soft. The state of the blood had been investigated. It had been found that the haemoglobin value was 46%, the erythrocytes numbered 2,400,000, and the leucocytes 17,000 per cubic millimetre; the percentage of reticulocytes had been estimated at 16. In the blood film some normoblasts had been noticed, and anisocytosis and polychromasia were present. The halometer reading indicated that the average diameter of the blood cells was  $6.6\mu$ , the normal reading being taken as  $7.2\mu$ . Spherocytosis was present, since though the mean corpuscular volume was within normal limits, the mean corpuscular diameter was reduced. It had also been established that the erythrocytes were unduly fragile; haemolysis commenced in 0.55% saline solution, and was complete in 0.40% saline solution.

The blood serum had failed to react to the Wassermann test, but had reacted positively to the Fouchet test. A delayed direct Van den Bergh reaction had been obtained. The treatment of the anæmic condition had been in progress for one week at the time of the meeting. A mixture containing ferrous sulphate had been given, the baby receiving 0.2 gramme (three grains) twice a day, and an injection of two cubic centimetres of "Campolon" with vitamin B<sub>12</sub> had been made under the skin. As the haemoglobin content of the blood had fallen to 35% and the red erythrocytes to 1,800,000 after removal of approximately ten cubic centimetres of blood for the various investigations, 155 cubic centimetres (five and a half ounces) of blood had been transfused from the father to the baby on September 12. On September 14 the haemoglobin value had risen to 93%.

The opportunity had been taken to investigate the blood of the baby's mother on September 13. She was aged twenty-seven years, and her spleen had been removed at the age of nine years. The haemoglobin value was estimated at 113%; the erythrocytes numbered 5,160,000 and the leucocytes 17,000 per cubic millimetre, the reticulocytes being less than 1%. The corpuscular fragility was increased, haemolysis beginning at 0.55% and being complete at 0.425% solution of sodium chloride.

Dr. H. BOYD GRAHAM said that he recalled the investigations carried out on the baby's mother, and the splenectomy. He had also had clinical experience of the occurrence of familial haemolytic jaundice in a number of the relatives. As there was no possible doubt of the diagnosis, and as splenectomy had proved so satisfactory to the members of the previous generation of the same family, he advised that the baby should be subjected to splenectomy at an early age—in fact, as soon as a surgeon could be obtained who would be prepared to expose the baby to the risk of operation.

Dr. J. G. WHITAKER said that he was sure that the surgeons would be very glad to cooperate with the physicians in the treatment of the baby.

Dr. RUSSELL HOWARD said that the baby was likely to get attacks of aplasia, and that there was a definite risk associated with splenectomy. It should also be remembered that there was an increased liability to infection following splenectomy, similar in many respects to that associated with scurvy and pink disease, which would lead to a post-operative risk while the baby remained in hospital. He thought that the baby should be kept away from the surgeons for a little longer. It should also be remembered that in well-established cases of haemolytic splenomegaly, splenectomy did not actually cure the patients; the erythrocytes remained unduly fragile.

Dr. A. P. DERHAM said that one of the relatives, when approached for information bearing on the familial incidence of the condition, had refused to assist, and had appeared to be bored to tears, probably as a result of the inquiries made by Dr. S. Cowen and others in 1922 and since. On account of the family attitude, and because of the loss of another baby at a tender age, he thought that an early operation on the baby shown that night was the correct line of action in spite of the risk.

#### Nutritional Anæmia.

Dr. Derham and Dr. Wood also showed a female baby, suffering from nutritional anæmia, who had been admitted to the Children's Hospital on February 7, 1938, at the age of nine months. The circumstances surrounding the baby's birth were stressed as ætiological factors predisposing to the anæmic condition. The birth was a month premature; the mother was unmarried and only fifteen years of age. She had had poor food and much worry, and had suffered from toxic eclampsia. The baby had been fed naturally to the age of three months, and had then received a mixture of milk and water and sugar, on which she had appeared to thrive until she was six months of age. It had then been found difficult to administer the food, and during the three months prior to her admission to hospital the baby had become very pale and had not gained much weight. On examination it was found that a severe degree of hypo-

chromic microcytic anaemia was present. The hæmoglobin value was estimated at 27%; the erythrocytes numbered 2,500,000 per cubic millimetre of blood. The baby weighed 6.4 kilograms (fourteen pounds) and the spleen was not palpable. Iron therapy with ferrous sulphate, 0.4 gramme (six grains) per day, had been commenced immediately, but the response had been slow, as the baby had had a prolonged attack of bronchitis and bronchopneumonia. A transfusion of 140 cubic centimetres of blood had been followed by a rise of the hæmoglobin value to 70%, and the baby had been sent home with directions for the continuation of the iron mixture. Four weeks later she had been returned to the hospital; the anaemia had reappeared, the hæmoglobin value being estimated at 38%. It was suspected that the directions for iron therapy had been neglected. Another transfusion of 150 cubic centimetres of blood was made forthwith, the iron treatment was reinstituted, and liver juice was added to the diet. For a few weeks the anaemia was hyperchromic, the hæmoglobin being at a higher level than the number of erythrocytes. After six weeks in hospital the baby had been discharged to her home again, but had been returned two weeks later suffering from bronchopneumonia. The hæmoglobin percentage had fallen during the pneumonic illness in spite of iron therapy, but had risen again when the pneumonia had subsided. A similar fall had occurred during another attack of bronchopneumonia shortly before the time of the meeting. Ulceration of the tongue had been observed on a number of occasions. The Wassermann, Fouchet and Van den Bergh tests had been applied to the blood serum, which gave no reaction. In skiagrams it had been found that there were no abnormal appearances in the bones of the skull or wrists. An opaque meal had been given and an X ray examination had been made; the stomach appeared to be of normal size and function. Even after iodized oil had been introduced, nothing more than increased markings was noted in the lungs field between the respiratory infections. Test meal investigations had been made in succession after milk, alcohol (26 cubic centimetres of 7% alcohol) and histamine (0.15 milligramme). Achlorhydria had been observed, but after the histamine injection a small amount of free hydrochloric acid had been obtained.

While the child was under observation the weight had remained subnormal, the spleen had become palpable and the tongue atrophic in patches. The diagnosis was nutritional anaemia, conditioned by achlorhydria and chronic respiratory infections. Discussion was invited as to whether hydrochloric acid should be given by mouth or what other steps should be taken to stimulate secretion of hydrochloric acid; whether a full diet would be sufficient in the future without the addition of iron; and whether other special treatment should be undertaken for the lung condition.

Dr. Wood added that he had been impressed by the opinion of Dr. Castle, of Boston, who had recently been in Melbourne, that the occurrence of the various anæmias was accounted for by several conditions. In the case of the baby shown that night, the mother's antenatal poverty, worry and poor dietary, and the fact that she had suffered from eclampsia, appeared to have operated to produce the anaemia, and the toxins present in the baby's body at birth had inhibited bone-marrow activity. There had thus been a predisposition to repeated attacks of bronchitis and bronchopneumonia, and, except by injection of histamine, acid production had not been stimulated. Dr. Castle had advised the necessity of securing sound dietary and general hygienic measures, in addition to the use of a crude liver preparation, such as "Campolon", or liver extract given by mouth, and iron therapy.

Dr. COLIN ROSS said that approximately 10% of patients with coeliac disease had been found to be achlorhydric and had responded to the administration of hydrochloric acid by mouth; further, the natural secretion of hydrochloric acid had responded to the administration of unactivated liver.

Dr. V. L. COLLINS said that the ferrous sulphate mixture that had been used for the two patients shown by Dr.

Derham and Dr. Wood contained dilute hypophosphorous acid, dextrose and chloroform water. It had been found to remain stable for at least two months and to be superior to other iron mixtures that had been used at the hospital; it was cheaper than the mixture containing iron and ammonium citrate, and the patients did not suffer from diarrhoea while taking it. Dr. Collins drew attention to the reference in certain text-books of physiology to the fact that approximately 5% of individuals in apparent good health were achlorhydric. The achlorhydric state should not, however, be regarded as normal; it was an indication of deviation from health. Reference had been made in recent articles to the occurrence of achlorhydria associated with prenatal deficiency in the mother's dietary. Calcium, iron, phosphorus and vitamins B<sub>1</sub> and B<sub>2</sub> were particularly likely to be deficient. Much closer attention to the dietary of the pregnant mother was required. Deficiencies could lead to loss of the foetus, to stillbirths, or to survival of the infant in an anemic and debilitated or under-nourished condition. Dr. Collins added that, in the light of many recent additions to knowledge, there was especial need for investigation of the dietary in diseases of a chronic nature. It was a sound practice to question patients about the details of dietary almost as a routine measure; even though it were to take fifteen minutes, the benefit arising from correcting manifest deficiencies would more than justify the extra time spent in extracting the information.

Dr. H. J. SINN said that at the Great Ormond Street Hospital, in London, reticulocyte counts were made in association with the administration of dilute hydrochloric acid in the treatment of anaemia and achlorhydria. He had formed the opinion that there was no response until iron was administered, but that the response to iron and dilute hydrochloric acid was not greater than that to iron alone, although frequently the addition of liver and vitamin C materially increased the speed of recovery. Dr. Sinn added that, if used in proper amounts, histamine was not dangerous, but was the real test of capacity to produce hydrochloric acid.

Dr. Derham, in reply, supported what Dr. Collins had said about the importance of a history of the dietary and of an attempt to unearth and correct deficiencies as part of the treatment of the patient's ill health. He had often regretted that the work at the Children's Hospital was not directed to a greater extent to the preventive aspect of disease. All his colleagues were grateful to Dr. Collins for what he had done and was doing on the dietetic side; but there was a large amount of investigation work on predisposing causes that should be done. When he was working in the out-patient department, Dr. Derham had formed the opinion that half the things that happened to children there did not happen to well-fed children. He had decided to go thoroughly into that aspect, and had applied for the services of an additional clinical assistant to make it possible. He advocated the addition to the staff of the hospital of keen young scientifically minded clinical assistants to probe the problems of prevention of ill health among children.

#### PUBLIC MEDICAL OFFICERS' ASSOCIATION OF NEW SOUTH WALES.

THE thirteenth annual general meeting of the Public Medical Officers' Association of New South Wales was held at the British Medical Association House, 135, Macquarie Street, Sydney, on January 24, 1939. The President, Dr. A. A. Palmer, was in the chair and nineteen members were present.

#### Annual Report.

The annual report for the year 1938 was adopted. The report is as follows:

The year 1938 has been a quiet one for the association, and the committee has contented itself with keeping a



watchful eye on the interests of members. The committee met nine times during the year, the attendances of representatives being as follows:

Dr. A. A. Palmer (President) .....	8	Dr. Edelsten Pope .....	6
Dr. W. K. Flook .....	7	Dr. H. H. Nowland .....	5
Dr. J. Cooper Booth .....	8	Dr. S. Evan Jones .....	5
Dr. G. L. C. Saunders ..	7	Dr. J. McManamey .....	7
Dr. C. E. Percy .....	7	Dr. H. H. Willis (Secretary) .....	9

The members of the association now number 102, of whom nine, having retired from the services, are honorary members.

Three circular letters have been distributed during the year.

Efforts to place our retired members in employment have been continued.

The annual social function was a luncheon in Sydney on August 18, 1938, when Dr. J. C. Geiger, Director of Public Health for the City and County of San Francisco, was the guest of honour. His address on the use of the Press in public health work was much appreciated by those privileged to hear it.

Our relations with other service organizations and with the British Medical Association remain satisfactory. No active part has been taken by the association in the conflict between private practitioners and the Federal Government about the national insurance scheme, and the committee has refrained from offering any advice to members on this subject. It is noted with satisfaction that in presenting their case for increased remuneration to the Royal Commission the private practitioners have not made statements reflecting on their colleagues in Government employ; but the committee learnt with regret that the Federal Council of the British Medical Association was opposing the promotion of medical officers already in the Federal services to the full-time salaried positions to be created under the Act. Our secretary was nominated as a candidate for election to the Council of the New South Wales Branch of the British Medical Association in March last, and for the second time failed to secure election. He was later coopted to the Medical Politics Committee. Though this does not solve the problem of representation of public medical officers, the Council's action is appreciated as a friendly gesture. No further action seems to have been taken by the Branch to grant us direct representation on the Branch Council, as in England. As a token of our sympathetic interest in the affairs of contract practitioners, a donation of ten pounds was made in the association's name to the fund raised to finance the case for the profession before the Royal Commission.

The New South Wales Public Service Board gave an unsatisfactory reply to our requests for increased remuneration at the biennial salaries review of 1937, but in later months a more generous attitude has been adopted towards medical officers in the lower grades. It is hoped to pursue this matter further at the biennial review next year. Certain proposals for reorganization of the New South Wales Health Department were considered but not advocated, because of opposition by some of our senior members.

The Minister for Health in New South Wales has refused a request for special representation of public medical officers on the Medical Board of New South Wales, but has promised to consider our claims along with those of other branches of the profession when the next vacancy occurs. The committee noted with indignation an unscrupulous and unfair attack upon the administration of mental hospitals in the sensational Press during the year.

The possibility of the appointment of foreign graduates to the medical services has received consideration, and appropriate informal representations have been made on the matter.

The importance of the maintenance of the prestige of public medical officers is considered worthy of the earnest consideration of our members.

#### Financial Statement.

The Treasurer's financial statement showed receipt of £34 16s. and expenditure of £25 17s. 8d. during the year 1938. The credit balance at the end of the year was £482 18s. 11d.

#### Election of Office-Bearers.

The election of officers for the year 1939 resulted as follows:

*President:* Dr. Edelsten Pope.

*Honorary Auditor:* Dr. S. McGeorge.

*Honorary Secretary:* Dr. H. Hastings Willis.

*Committee:* Dr. H. H. Nowland and Dr. S. Evan Jones (Mental Hospitals), Dr. J. Cooper Booth, Dr. C. E. Percy and Dr. J. McManamey (Health Department, New South Wales), Dr. Edelsten Pope and Dr. W. K. Flook (Education Department), Dr. G. L. C. Saunders (Works and Railways Group), Dr. H. H. Willis (Repatriation Department).

#### Vote of Thanks.

On the motion of Dr. Evan Jones, seconded by Dr. Hastings Willis, a hearty vote of thanks was accorded Dr. A. A. Palmer for his services to the Association since its inception.

## Medical Practice.

### REPORT ON AN INVESTIGATION OF TWENTY-THREE CASES OF POLIOMYELITIS IN WHICH THE "KENNY SYSTEM" OF TREATMENT WAS USED.

THE following is a report by W. R. Forster, M.D., M.S., F.R.C.S., and E. E. Price, M.D., F.R.C.S., F.R.A.C.S., on twenty-three cases of poliomyelitis in which the "Kenny system" of treatment was used. The treatment was carried out at the Convalescent Branch of the Children's Hospital at Hampton, Victoria.

#### PART I.

To study the effects of the Kenny method of treatment of poliomyelitis twenty-three cases have been under observation at the Children's Hospital Convalescent Branch, Hampton, for varying periods since January, 1938, to the present time.

In addition two other cases were admitted but did not continue with "Kenny" treatment and have been excluded from this report.

These cases fell in two groups:

**A. Recent.**—Twenty cases were received within five weeks of their admission to the Infectious Diseases Hospital, Fairfield. In detail nine cases were received during the third week, eight cases during the fourth week, and three in the fifth week.

**B. Late.**—Three cases were received several months after the onset—one four months and two six months after the onset. Of these, two had had respirator treatment and one had been unrecognized as a case of poliomyelitis.

In all the recent cases tenderness was present in some degree in the paralysed limbs and joint movement was painful and restricted. For this reason, especially in the younger children, accurate estimation of muscle power was difficult at the first examination.

Of the recent cases, fourteen had not been splinted at all; the remaining six had been put in splints for periods varying between three and fifteen days.

Muscle power was estimated according to the standards at present in use among physiotherapists, namely: 5 = no

contraction, 4 = flicker, 3 = movement with gravity eliminated, 2 = movement against gravity, 1 = movement against resistance, N or O = normal, + regarded as stronger than -.

Each case, as soon as possible after admission, was examined by one of us in conjunction with Sister Kenny and a physiotherapist. A muscle chart was prepared to record our personal findings and this examination was repeated at intervals of four to six weeks to enable a systematic record of progress to be made.

From our observation the following were the general lines of treatment carried out in these cases.

#### Position.

The patients were placed in bed, supine, with the mattress supported by fracture boards. A foot-piece supported the feet at right angles and the legs were parallel in line with the trunk. The knees were maintained in about 5° of flexion by means of posterior pads. The arms were abducted rather less than 10° at the shoulder joint, the elbows were extended and the forearms were mid-prone, bringing the thumb uppermost. The position as described was maintained by constant supervision.

If any tendency to deformity was observed, special measures were adopted. These included:

1. External rotation of hips. Sandbags were placed along outer aspect of foot and leg.
2. Equinus. A period of a half-hour daily in a special stretching apparatus was employed.
3. Valgus and varus. Sandbags and light bandages were applied to pull in the opposite direction.
4. Pelvic tilt. One patient had a leg half an inch short and this was accommodated by a pad of this width tied to the sole.
5. Wasted glutei. A buttock pad was measured so as to compensate for the loss of bulk and tied in position.
6. Weakness. Pieces of strapping were placed in the dorsal aspect of the fingers to keep the interphalangeal joint extended.

At a later date the following modifications suggested by us were accepted by Sister Kenny's representative:

1. Deltoid cases. In certain cases of severe deltoid weakness the arms were placed in 45° of shoulder abduction for considerable periods and even full abduction for half-hour periods.
2. Abdominal cases. Where there was definite weakness corsets were eventually provided, though this was after two months without any support.

#### Balneotherapy.

Once daily each patient was placed in a warm bath and exercises given. The patient was then sprayed with cold water, dried and placed on the treatment table for further exercises including those impracticable in the water.

#### Physiotherapy.

Each day there were four periods of treatment: (a) Passive movement. A complete range was insisted on in every joint. (b) Bath treatment with reeducation. (c) Reeducation alone on treatment table. (d) Passive movement.

In the exercises load was graduated to power, but each movement was performed three times only. If there was insufficient active power the movement was completed passively.

We have been unable to agree with Sister Kenny that a patient's mental effort can be appreciated by the hand unless this produces a minimal contraction in the muscle examined.

Sitting and walking were permitted at an earlier stage than that which would be regarded as safe under orthodox systems of treatment.

#### Rest.

A sleep of an hour's duration was encouraged during the mid-day period.

## PART II.

### Muscle Recovery.

#### General Muscle Recovery.

For the purpose of assessing general muscle recovery the twenty-three cases were classified into the following groups:

1. *Mild.* In this group were placed cases with a slight degree of paresis only which might be either confined to one limb or more generalized slight paresis.

2. *Moderate.* In this group were placed cases in which the paralysis was more extensive and in which certain important muscles were affected to a more severe degree.

3. *Severe.* In this group were placed the cases which showed an extreme degree of paralysis, whole limbs or groups of muscles failing to show any response to effort.

On this basis of classification the results may be summarized as follows:

1. *Mild Cases.*—Seven were classified as mild. Four of these cases are practically normal or will certainly become so. Three still have some residual paralysis interfering with function. These are in detail:

(1) P.G., who had a severe abdominal wall paralysis which was unprotected for some time. He has improved lately, but is not yet satisfactory.

(2) R.H. This boy had a severe facial and mild trunk and leg paralysis. The facial paralysis has improved, but would still be classified as bad in the lower face. Elsewhere he has recovered.

(3) C.A. was paralyzed in the right leg, especially key muscles. He has improved, but owing to the distribution of the paralysis is still unable to walk well.

2. *Moderate Cases.*—Seven cases were classified as moderate. In one case, J.B., improvement is uniformly satisfactory. In three cases improvement is satisfactory except in a localized group.

M.H. had a severely paralysed left hand and if anything this appears to have deteriorated.

V.K. had degree of paralysis five (5) in the left anterior tibial and it has shown no recovery.

K.S. had severe right anterior and posterior tibials and these have shown no recovery.

In three cases the results have been disappointing.

N.K. was admitted six months after the onset of paralysis and has practically no recovery.

R.McL. had a gross sterno-mastoid and prevertebral paralysis and has shown no recovery.

R.R. This is a child, aged two years, in whom a good deal of involuntary spasm is a feature, the muscles paralysed being the anterior and posterior tibials and the *glutei maximus* and *medius*. All these muscles appear to have retrogressed.

3. *Severe Cases.*—Nine cases were classified as severe. One case, S.B., has made good recovery. Six cases have made fair progress, but still have paralysis of varying severity.

E.S. still has moderate degree of shoulder girdle weakness.

M.S. has still some weakness in her left posterior tibial and long flexors of her toes.

V.A. General improvement in the limbs, but still severe weakness in the abdominal trunk and neck muscles.

E.C. This case was a very gross one, practically no muscle escaping. Some improvement has occurred throughout, but she remains severely crippled.

F.J. In this case there was very severe paralysis in both legs and abdomen. The right inferior extremity was flail. There has been very definite return of power in the legs.

B.M. This child had practically a flail left arm and hand and severe paralysis of the right arm with trunk and slight leg involvement. She has made very satisfactory progress, but the left hand is still severely damaged.



Two cases have shown negligible improvement.

K.S. This boy had severe trunk and shoulder girdle paralysis and scattered paralysis. This patient had chorea throughout the course of treatment.

E.S. This child had gross paralysis of both shoulder girdles and both upper limbs as well as intercostal paralysis. On admission she was extremely stiff and rigid and owing to her respiratory paralysis had to be returned to a respirator for three months.

#### Summary of Results of Treatment.

Of these twenty-three cases, four may reasonably be accepted as having fully recovered. All of these were regarded as mild cases and under any system of treatment would have been given good prognoses.

A further fourteen cases have made recovery which we regard as reasonably satisfactory, though certain special muscle groups have been disappointing. We have analysed certain special muscle groups separately later.

In five cases the results have not been satisfactory.

K.S. had chorea throughout.

E.S. was a respirator case and was received for treatment four months after the onset, and had to be returned for a further period of respirator treatment.

N.K. was received very late, six months after the original attack, is a baby, and was very difficult to control.

In these three cases there appears a satisfactory explanation for the failure of treatment.

#### Special Muscle Recovery.

(1) *Tibialis Anterior* (Sixteen Patients).—(a) Good recovery has occurred in twelve cases. (b) Poor recovery in nine cases. (c) Retrogression in two cases.

(2) *Tibialis Posterior* (Sixteen Patients).—(a) Good recovery has occurred in eleven cases. (b) Poor recovery in eight cases. (c) Retrogression in four cases.

(3) *Deltoids* (Ten Patients).—(a) Good recovery in ten cases. (b) Poor recovery in eight cases.

(4) *Sterno-Mastoids* (Ten Patients).—(a) Good recovery has occurred in ten cases. (b) Poor recovery in nine cases. (c) One case there has been retrogression.

(5) *Abdominal Muscles* (Seventeen Patients).—(a) Good recovery has occurred in seven cases. (b) Poor recovery in ten cases. At the onset of treatment none of these patients were given any abdominal supports, but at the end of three months, owing to our dissatisfaction with their progress, properly fitting abdominal corsets were applied to the majority.

(6) *Small Thenar Muscles* (Five Cases—Nine Hands).—(a) Good recovery occurred in two cases. (b) Poor recovery in five cases. (c) In two cases there was retrogression.

The numerical discrepancies in the above are explained by the occurrence of a proportion of bilateral cases.

#### Stiffness.

Rapid diminution of stiffness and soreness was observed in all cases where present on admission and in no case did stiffness develop while under treatment.

It is to be noted that in the case who was returned to the hospital for respirator treatment a good deal of stiffness recurred.

In a few individual instances stiffness has not completely disappeared, but it is a feature of this series that joint movement is free and painless even in those joints which have little or no voluntary movement. Stiffness of the spine has proved most resistant and can still be shown in three cases.

#### Deformity.

We have found very little tendency to the development of deformity, but in view of the importance of this question we have reviewed each case thoroughly.

In several cases pre-existing deformity was noticed at an early examination and has not increased.

In five cases a tendency to deformity was noticed, but has been corrected. In seven cases slight but recognizable deformity exists. These include three examples of *pes valgus*, two examples of *pes equinus*, two examples of *pes cavus*, one example of scoliosis, one example of kyphosis, one example of pelvic hitching.

#### Circulation.

The circulation, judged by appearance, warmth and skin nutrition, appears to have remained satisfactory in all patients. In no case have chilblains, cyanosis nor pressure sores developed.

#### PART III.

While it is the object of this report to reach a conclusion on the comparative value of the Kenny system, it must be realized that certain difficulties make this impossible in many respects. Thus:

1. Prognosis in any individual case cannot be made at the onset. Consequently any comparison of results is subject to this fallacy.

2. Orthodoxy is not capable of precise description. Orthopedists vary very much among themselves in one country and from country to country in detail and even principle. It must be conceded that the methods employed by the authors of this report may not be ideal, and that other surgeons might have obtained better results in the same cases.

3. Surgeons and physiotherapists who have been responsible for the treatment in the present epidemic are largely, if not unanimously, of the opinion that restriction of funds and personnel have diminished the efficiency of whatever method they wished to use.

It is extremely important that this point should be stressed and fully appreciated by those whose responsibility it may be to organize treatment in future epidemics.

Bearing these facts in mind the following points seem to emerge from a study of the cases treated by the Kenny system.

#### Muscle Recovery.

There is no proof that the unsatisfactory cases would have been improved by splinting, but we feel bound to state our opinion that the Kenny system of immobilization is not adequate to rest certain muscle groups such as the tibial muscles, thenar muscles, abdominal and neck muscles, nor to maintain rest in an unusually active child. We have been led to this conclusion by the observation that retrogression has occurred in some of these muscles and definite improvement has been seen in others following the application of corsets. We believe that rest in an unstretched position is an essential for maximum recovery of power, in association with other measures.

In connexion with this principle we wish also to state:

(a) It has been held that momentary stretching of a very weak muscle, for example, the deltoid, can undo the patient work of months.

We see no evidence for this and feel that such temporary stretching is not inimical to the eventual recovery of any muscle. Ten cases of deltoid paralysis with little or no voluntary power have improved on Miss Kenny's method with the arms abducted no more than 10°.

(b) While we are convinced that habitual, as opposed to momentary, elongation results in paresis, we very much doubt if the position of full relaxation is most favourable to recovery.

#### Stiffness.

In the early weeks of reeducation in this epidemic the occurrence of more or less painful stiffness and muscle hyperaesthesia was extremely common. In a majority of cases this disappeared during treatment, but in certain cases it has persisted. These cases show one or more of the following features:

1. They were respirator cases.
2. There was severe paralysis of the muscles moving the stiffened joint.
3. They were cases in which muscle spasm was a prominent feature. In such cases, attempts at passive movement are hampered by antagonistic contractions of the affected muscles, which are also provoked by handling the patient. More important still, such spasms may habitually affect strong muscles controlling a joint, with eventual permanent shortening of the muscle and fixation of the joint in deformity.

In our opinion stiffness results from the operation of two factors:

1. Muscle spasm. This seems especially to affect the girdle muscles, resulting in various deformities of the scapula particularly.
2. Prolonged fixation. The fate of the paralysed muscle is fibrotic replacement and, if this be not prevented, adaptive shortening. We believe that such fibrosis, and not adhesions, is the essential cause of deficient joint movement in poliomyelitis and, of course, this may occur in totally paralysed muscles. In our opinion prolonged periods of fixation, by which we mean twenty-four hours, even in excellent position, favours such adaptive shortening and consequently results in stiffness.

It may be argued that stiffness is not particularly important, or that it is not a troublesome feature and readily responds to treatment. This is not our experience with stiff cases. We find that such patients suffer considerable pain which prevents their cooperation in exercise, and that their joints are quite frequently fixed in some undesirable position. Further, in our hands, under orthodox treatment, the condition has only slowly improved.

While a critical examination of Miss Kenny's cases will reveal some limitation of joint movement, especially in the spine, we are convinced that there is decidedly less stiffness in these cases than in those cases which we have ourselves treated by orthodox methods or received from other surgeons.

We suggest that an explanation of this difference should be earnestly sought.

Miss Kenny strongly stresses the importance of muscle spasm and its prevention and cure. We think that her views on this subject should receive careful consideration. She maintains that it is provoked through skin reflexes and therefore condemns restrictive splints. This view may be correct in such cases. It seems possible to us that deficient muscle aeration is present leading to a hyper-excitability of muscle fibre. This emphasizes the importance of improving muscle circulation on which Miss Kenny lays great stress and promotes by the use of hot baths and fomentations.

It seems also important to prevent shortening of muscles by early, frequent and full movements of the joint. Miss Kenny, in our opinion, rightly stresses this feature. We believe that it is a cardinal error to leave patients in unrelieved fixation for twenty-four hours and more and to be satisfied with a partial range of movement. We realize that shortage of staff made frequent treatment impossible, but it must be maintained that this was not and is not satisfactory. In our opinion the harmful result of momentarily stretching paralysed muscles has been in the past much exaggerated. We believe this is no contradiction to a full range of passive movement.

We do not wish to infer that the idea of early, frequent and full movement or the value of heat is unknown to the medical profession in the treatment and prevention of joint stiffness. The value of Miss Kenny's work lies in the emphasis on these points.

We therefore explain the relative absence of stiffness as follows in Miss Kenny's cases:

1. Measures are adopted to stimulate circulation in the part, though not directly in the muscle.
2. Active and passive movements are undertaken early, done frequently, and are of full range.

We have seen no evidence that, when this is done as advocated by Sister Kenny, harm results. The amount at each session is modified by the condition of the patient. Usually it is three movements in each direction, but may be less.

3. Measures are taken to combat pain and spasm in the early cases. Hydrotherapy seems of definite value here. Miss Kenny also advocates fomentations very strongly, but we are sceptical of their efficiency.

#### Splints.

Miss Kenny claims that she does not use orthodox splints, but she does endeavour to fix the patient in a certain position, which is the principle of splinting.

We are of the opinion that Miss Kenny's method has the following disadvantages:

1. It is uncertain. Even under hospital conditions minor and even major lapses occur, especially during sleep. In our opinion it would probably prove quite ineffective if applied by the mother at home.
2. It is not sufficiently detailed. If properly applied the major joints are put at rest, but nothing is provided for the tarsal joints, for the small muscles of the hand, the neck or abdomen.

On the other hand, incorrect splinting may have the following disadvantages, which are not found in Miss Kenny's method:

1. Deformity may be initiated.
2. Pressure sores may occur.
3. Circulation may be impeded by tight bandages.

None of these disadvantages is essential to the use of splints. (We feel, however, bound to state that in our opinion such faults were present from time to time in some of the splints used in the present epidemic.) There is no reason why splints should not be constructed and applied so that all these defects are removed. This involves:

1. The splint must conform very accurately to the position required for the patient. This means that the splint maker must be given time and facilities to construct a splint with which he is completely satisfied as well as the surgeon.
2. The splint must be regularly serviced to eradicate defects acquired during use.
3. The metal parts must be adequately padded, using "Sorbo" rubber where the patient lies.
4. Retentive straps must be contrived that they can be loosely applied, without the patient being able to escape.
5. While these remarks apply to the modified double Thomas splint at present in use, it does not follow that this is an ideal type of splint.

#### Deformity.

In this series seven isolated instances of mild deformity are recorded. This appears to be very satisfactory. We would remark that expected deformities from unbalanced muscle pull have not materialized.

On the other hand we have encountered many cases of deformity in splinted patients, though the proportion of the total number cannot be stated. We feel this calls for comment. In our opinion these deformities are initiated either by muscle spasm or by some palpable defect in the splint and confirmed by adaptive shortening in the muscles concerned.

#### Conclusions.

Deductions drawn from a study of twenty-three cases may be subject to fallacy. So far as this investigation goes it would appear that, excluding the quoted unsatisfactory cases, return of muscle power is comparable to that obtained by orthodox methods. Pain on movement and stiffness rapidly diminish and are never so marked as in the splinted cases. The tendency to deformity has given us less trouble than in cases with ill-fitting splints.



We are inclined to think, therefore, that there is no need for hurry in the provision of splints, but that these can be made at leisure for specific indications. This leaves the patient free for repeated joint movement and balneotherapy. We believe that prolonged periods of immobilization in hastily contrived splints will certainly result in stiffness and possibly deformity.

In our opinion, splints to protect special muscles have a very important place in the treatment of poliomyelitis, but their frequent removal must be insisted upon for the purposes of reeducation and nutrition of the limb. Correct splinting is an advantage for many cases of paralysis of the hand, foot and abdomen, and may be regarded as an essential for home treatment and unruly cases.

We are of the opinion that Miss Kenny has made a definite contribution to the treatment of poliomyelitis.

1. She has provoked a critical and in several respects beneficial review of the treatment of poliomyelitis in general.

2. She has drawn attention to the evils of improper splinting.

3. She has contributed to the knowledge on the subject of stiffness and has emphasized the value, in this respect, of full and more frequent movements, beginning as early as the third week.

We are of the opinion that her methods might be beneficial to patients with stiffness and spasm, and should be given a trial in such cases.

We suggest therefore that work at Hampton be continued for the following purposes:

1. To determine whether splinting will improve the rate of muscle recovery in selected cases at present in the ward.

2. To determine whether Kenny methods will improve selected cases of stiffness, without other detriment.

3. To continue unmodified in certain cases to permit longer observation of the results.

We consider that it would be of very great value if a representative medical committee should be appointed to formulate an ideal scheme of treatment for poliomyelitis.

## Special Correspondence.

### PARIS LETTER.

FROM OUR SPECIAL CORRESPONDENT.

THE events in world politics of September, 1938, and the international tension that resulted from it, reacted in two ways on the life of French medical practitioners. First, the question of the low birth rate was once more stirred up. Although this is not a strictly medical question, medical men are nearly always in charge at births, and their knowledge of feminine biology and psychology makes them, from this point of view, the obvious counsellors of those in authority. The latter, moreover, appear to be bestirring themselves. Improvement in sanitary conditions is not sufficient to make good the deficiency; the necessity for assuring a truly effective family policy must be realized.

Another reverberation was the abandonment or the postponement of a certain number of congresses or ceremonies. The International Congress of Hygiene, which was to have taken place in October, was postponed indefinitely. The jubilee of the most celebrated jewel of French medicine, the Pasteur Institute, fell on November 14; it had to be put off, and there appears to be a hope that it will be held in March, although nothing has as yet been decided.

But the jubilee of an event very closely connected with the birth of the Pasteur Institute, and with Pasteur's theories, was nevertheless celebrated recently, and furnishes us with an opportunity to recall this most memorable of all periods. Fifty years ago, approximately, there was born in Paris a journal, *Le bulletin médical*, which was founded for the express purpose of playing a part in the spreading of Pasteur's ideas—a part which, moreover, was very great. It was founded in 1887 by J. Grancher, the medical practitioner whom Pasteur, who was not a medical man, entrusted with the honour of giving the first inoculation against rabies to man. This journal celebrated its jubilee by a special number, in which we call your attention to an article by Pasteur Valléry-Radot, grandson of Louis Pasteur. In this article the author describes in detail the story of the intensely interesting struggle between Louis Pasteur and Michel Peter, a very remarkable medical practitioner, who began life as a typographer. His caustic wit and his eloquence were famous; and perhaps his sharp criticisms were not without effect upon the faultless and extraordinarily fruitful method with which Pasteur pursued his researches.

The autumn session of the permanent committee of the *Office International d'Hygiène Publique* was successfully held. At this session was studied the interpretation of certain questions of quarantine and of epidemiological points, particularly referring to cholera, to yellow fever and to international protection against diseases. Dr. Morgan, the delegate from Great Britain, was elected president of the committee.

This session was followed by an international conference, presided over by M. Bonnet, the French Minister for Foreign Affairs. The object of the conference was the partial revision of the Sanitary Convention of 1926, relating to the disbanding of the Sanitary, Marine and Quarantine Council of Egypt. About 75 countries were represented. Dr. J. H. L. Cumpston was unable to leave Australia on account of pressure of work, so the Commonwealth Government appointed as delegate Dr. Frank McCallum, whose remarks were particularly well chosen. The organization had been carried out entirely by the *Office International d'Hygiène Publique* with such success and such diligence (in three days) that there was no time to arrange even one reception. The Alexandria Bureau naturally is under the control of the International Public Hygiene Service.

It is known that examinations play an important part in French medical life. Whilst in most countries appointment to positions and important posts is usually made by choice and according to qualifications, in France, on the contrary, it is made by examination. Such is the case, for example, in Paris, with regard to the medical officers of the Prefecture of Police, who deal with prostitutes; this fact is unique and bears witness to a desire of the French people to be democratic.

Nevertheless, in France numberless men have succeeded independently of any examination and any protection. Such was the case with Pasteur, who was able, thanks to his own ability, to discover antirabies vaccine and to found the Pasteur Institute. Moreover, it is not to lay intervention and to protection that Duchenne, of Boulogne, owes the fact that he became, by the very important discoveries that he made in neurology, a very eminent precursor of the school of Salpêtrière and of Charcot, and stands as a symbolical figure of the power of an intelligent and industrious man to attain a prominent position and make important discoveries. It is thus that we must explain the recent formation of an *Académie Duchenne* at Boulogne.

The last quarter of 1938 was the congress quarter. Let us mention a few of them, giving the subject of their reports, to show what is interesting medical France at the moment.

The seventeenth Congress of Surgery was held from October 17 to October 22, and was marked by a tendency to specialism which, incidentally, is spreading more and more. On the day of the opening meeting, the President,

Professor Léon Imbert, of Marseilles, had on his right a patron, the well-known man of letters, Paul Valéry, who is not a medical man, but who, in many of his books, such as "*Charmes*", "*Oimettère marin*", has shown himself capable of a clear comprehension of the weaknesses and inadequacies of medical hypotheses. The President elected for 1939 was a practising surgeon from Chartres, of great ability, Dr. de Fourmestraux.

This congress was devoted to fractures of the vertebral column (Charbonnel, of Bordeaux, and André Sicard, of Paris), to the treatment of staphylococcal septicæmia (Jean Patel, of Paris, and Moiroud, of Marseilles), and to sarcoma of muscles (Pierre Moulouguet, of Paris, and Eugène Pollosson, of Lyons).

The tenth *Congrès des Pédiatres de Langue Française*, held in Paris from October 27 to October 29, was devoted to the severe anemias of infancy (Louise Weill, of Lyons), to the malignant syndrome occurring during toxic infections (R. A. Marquézy, of Paris, and Melle Ladet), to megacolon and dolicozon (P. Rohmer and A. Vallette, of Strasbourg, and Boppe, of Paris).

Another congress, also very important, was held in Paris from October 24 to October 26, 1938. This was a French Congress of Oto-Rhino-Laryngology, of which the President was Dr. Le Mée, of Paris, and at which the following were discussed: tuberculosis of the ear (F. Collet and R. Mayoux, of Lyons), and tumours of the hypopharynx and the larynx (Huët, of Paris, and Péri, of Algiers).

From November 10 to November 12 the twenty-fifth French Medical Congress was held. In his inaugural address Professor Olmer emphasized the importance that is at present given more and more to the "*terrain*". The congress was devoted to discussion of the following subjects: the ictero-hæmorrhagic spirochaetoses (Jules Troister and Maurice Bariéty, of Paris, and Bordes and Rivoalen, colonial practitioners); physio-pathological phenomena bound up with chlorine deficiency (L. Ambard, J. Stahl and D. Kuhlmann, of Strasbourg, René S. Mach, of Geneva, Y. Bourde, of Marseilles); the treatment of the avitaminosis of adults (G. Mouriquand, of Lyons, André Chevalier, of Marseilles, F. Toullec and M. Riou, of Hanol, A. Giroud and C. P. Leblond, of Paris, J. Nitzulescu, of Jassy, and H. Willstaedt, of Upsal).

To Professor G. Ramon, of the Pasteur Institute, we owe the discovery of tetanus and diphtheria anatoxins. Vaccination against diphtheria by anatoxin has since been made compulsory by law. This fact recently stirred up a lively discussion in the Chamber of Deputies. In the opinion of those who have studied the question calmly, vaccination against diphtheria appreciably reduces the morbidity and the mortality of diphtheria. An attempt is being made to link it up with vaccination against tetanus by various techniques, and it is hoped that sufficiently good results will be obtained, so that it can be made legally compulsory.

Amongst medical personalities whose death has left a blank difficult to fill figures Professor Octave Crouzon (1874-1938), the author of a great number of interesting works on neurology and morphology. He gave at the medical school a course of lectures in medical sociology, inaugurated by himself. Further, Crouzon was the first to describe accurately the disease frequently designated as "Crouzon's disease" and "hereditary cranio-facial dysostosis". Another disorder bears the name of Crouzon in association with that of Pierre Marie. He described "*paralysis alternans*", type Pierre-Marie-Crouzon", and sought to unite still more neurology with psychiatry.

Raoul Bensaude has passed away also during these last weeks. Born in 1866 in the Azores, Bensaude came to Paris while he was very young. It was there that he studied and that he quickly acquired the coveted title of "*médecin des hôpitaux de Paris*". He specialized early in diseases of the digestive system, and made many contributions to the study of the various forms of colitis. He was also very interested in diseases of the rectum and anus, as well as of the œsophagus. He invented a rectoscope and an œsophagoscope, and did a great deal to spread the

method of treatment of hemorrhoids by sclerosing injections.

Medical men consider themselves more and more as injured by those in authority, who encroach in every possible way on their profession. In France indeed, as everywhere, the character of medical practice is rapidly changing. The unencumbered medicine and independent medical practitioners of other days are being succeeded by an administrative medicine and salaried medical practitioners. This transformation, from which general hygiene and the prevention of diseases certainly benefit, is not taking place without clashes that the present economic depression renders particularly painful. Of this the first evidence was a meeting which was held on November 4 by the medical practitioners in and around Paris, and which could be described as almost revolutionary, since an allusion was made to a sort of strike—a phenomenon which, incidentally, has been observed in certain countries. In the notice convening this meeting the following words appeared: "Like all other citizens, we have the right to get from our work the resources that are necessary to us. The situation has become so acute that it can no longer be prolonged, because, in spite of our repeated overtures, our goodwill has not been taken into consideration and we are forced to cry aloud what, up to the present, no one has been willing to hear." This gathering adopted the agenda proposed by Dr. P. Ecklé, which closely resembled that of the annual meeting of French Medical Syndicates.

The annual meeting of the League of French Medical Syndicates took place on December 16, 17 and 18. Amongst the questions that this gathering discussed is found "the Pomaret superannuation", from the name of the Minister for Labour then in office, the author of a proposition which greatly interested medical men and which would allow of the contemplation of a pension for medical practitioners of about 24,000 to 27,000 francs, from the age of sixty-six years. Death indemnities, sharply increasing according to the number of children, could equally well be contemplated, as well as indemnities and financial aid for medical men forced to cease practising their profession before the retiring age. Finally, a fund for loans and financial aid could be of use in special cases. But in return retirement would be compulsory, and practice would be forbidden after the age of sixty-six years.

The question of social insurance also engrossed this gathering, for the insurance funds are tending actually to create organizations which provide medical care and in fact deprive the sick person of his free choice of a medical attendant—a free choice which, however, had been sought by legislators and which constitutes one of the claims of the medical profession.

The meeting was also interested in the question of foreign medical men who have taken shelter in France. It protested against the naturalizations granted in excessive numbers to medical men and medical students, chiefly Jewish. It was in favour of foreign students' finding in the universities the most liberal and cordial welcome, so that the spread of French science and culture might be aided; but this fact did not imply, with some justifiable exceptions, the absorption of foreign elements. The meeting sought to obtain, with this object in view, the creation of a naturalization service.

This meeting discussed the question of specialists and of their technical qualification sanctioned by a university diploma after examinations and special courses.

Finally, the medical inspection of schools was the subject of an interesting discussion, after which the meeting demanded that this inspection should be organized everywhere by medical men, whose nomination would be made by the administration from a list put forward by the medical syndicate of the province. On this point also the meeting was violently opposed to the idea that this inspection should become an organization with power to give medical care. In no case may the inspection of schools comprise medical care; the child who is found to have need of such care must simply be reported to its family.



## Obituary.

### WILFRED BILLINGSLEY DIGHT.

Dr. WILFRED BILLINGSLEY DIGHT, whose death was announced a few weeks ago in this journal, was popular among the members of the medical profession in New South Wales and had earned for himself a reputation as a wise and sound radiologist. He was the third son of the late John Richard Dight, grazier, of the northern district of New South Wales, and was proud of the long connexion of his family with the life of the State. His great-grandfather was John Dight, a surgeon, who was born in England in 1772 and who came to Australia as surgeon of the ship *Cornwallis* in 1801. John Dight did not practise his profession in Australia, but took up land and built a homestead at Richmond, New South Wales, in 1802. This house still stands and is in a good state of preservation.

Wilfred Dight was educated at Singleton Grammar School and at The King's School, Parramatta. He was a member of the school's first XI. At the University of Sydney, where Dight studied medicine, he gained his "blue" in cricket, rowing and athletics. He graduated as Bachelor of Medicine and Master of Surgery in 1902. After graduation he accepted a resident appointment at Warwick Hospital, Queensland. He practised first at Riverstone, New South Wales, and afterwards at Campbelltown, Scone and Chatswood. After the War he specialised in X ray work in Macquarie Street, Sydney. He had the confidence of his brother practitioners and held honorary appointments at the Royal Prince Alfred Hospital, the Prince Henry Hospital and the Royal Alexandra Hospital for Children. He is survived by a widow and two married daughters.

Dr. H. S. Stacy writes:

And so another of my contemporaries born and brought up in the town of Singleton, in the Hunter River Valley, has "passed on".

Throughout the greater part of our lives Bill (Wilfred Billingsley) Dight and I were associated in one way or another, so that I have every reason to know how painstaking, meticulous and efficient he was in all that he undertook, whether it was as a general practitioner in

Riverstone, Scone or Chatswood, or as a radiologist in Macquarie Street.

I also know how deeply he felt the circumstances that prevented him serving with the Australian Imperial Force. He made up for this by working body and soul for the returned men in the X ray department of Randwick Military Hospital.

His early education was at Singleton Grammar School, followed by The King's School. While doing his medical course he was for some years in residence at Saint Paul's College. At the university he took an active interest in sport, particularly cricket, rowing and athletics, in each of which he gained his "blue".

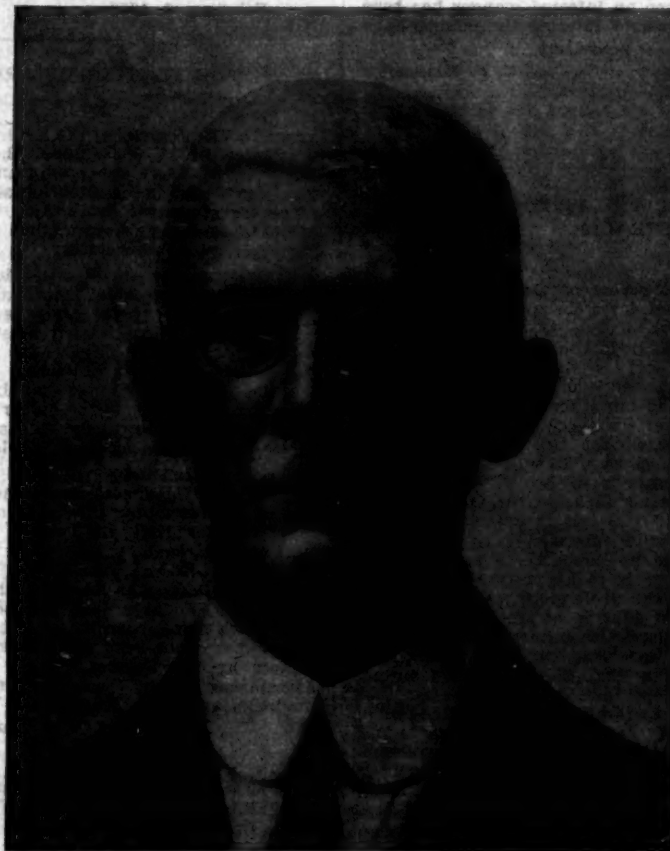
In his later years he played a lot of golf at the Royal Sydney Club at Rose Bay, but latterly even this was too

strenuous, and the enthusiasm he displayed in every variety of his work and play he put into bowls at the Royal Sydney and Killara Clubs.

He was one of that diminishing class, a class that distinguishes very sharply between a profession and a trade. If the profession does not command the respect it once did, well, the reason is obvious.

The words of the Rubáiyát keep coming to my mind with increasing frequency of late years: "Lo! some we loved, the loveliest and the best that Time and Fate of all their Vintage prest, have drunk their Cup a Round or two before, and one by one crept silently to rest."

To his unselfish, devoted wife and daughters I am sure a large part of the profession tender their deepest sympathy in their loss, feeling glad, however, that the suffering of their colleague during the last few years has come to an end.



### JAMES ELI WEBB.

WE regret to announce the death of Dr. James Eli Webb, which occurred on February 14, 1939, at Bexley, New South Wales.

### JAMES ALEXANDER HARBISON.

WE regret to announce the death of Dr. James Alexander Harbison, which occurred on February 15, 1939, at Middle Brighton, Victoria.

## Correspondence.

### THE STABLE DOOR.

SIR: In your editorial, "Maternal Welfare: A Notable Advance", you give an outline of a scheme introduced by the Department of Public Health of New South Wales for the reduction of maternal mortality. Except for the provision of the service of consultants in cases of difficult labour, which is, after all, only a predisposing cause of septic complications, all the other measures suggested are concerned with treatment, unless important details to be found in the scheme have been omitted from the editorial. Have not these methods had wide adoption in other lands without notable result? I admit it is a useful precaution to shut the stable door when an infected manger has been discovered, but who (not what) infected the manger?

Yours, etc.,

A. C. F. HALFORD.

Wickham House,  
Wickham Terrace,  
Brisbane.  
February 9, 1939.

### ORGANIZATION OF THE PROFESSION IN AUSTRALIA.

SIR: The section of the report of the Federal Council in the issue of the journal for February 4 should be of interest to those members of the Association who, for many years, have given no little time and thought to the question at issue.

It may not be known to some of the newer members of the Association that the move for the formation of a Federal Council came from the Queensland Branch, and furthermore that the reason for this action was that certain members of the then Council were of the opinion that a Commonwealth ministry of health, which would control all services in relation to health in Australia, was about to be established.

Should this Commonwealth ministry have eventuated, the Federal Council would no doubt be in a much more favourable position than it is today, with corresponding benefit to the public and the profession.

Following the events of 1932 it became apparent that there was to be no Commonwealth ministry of health controlling health in Australia. Had this eventuality been foreseen, it is very unlikely that the Queensland Branch would have taken any steps towards the formation of a Federal Council; quite likely the Federal committee system would have been retained.

In the desire for a better organization of the profession in Australia there are certain prerequisites that should be considered by those taking action:

(1) All members of the Association should be asked whether they are making an effort towards the achievement of the objects of the Association.

(2) All leaders in the Association should be urged to use every endeavour to assist the members in the task indicated.

(3) Groups (2) and (1) should give earnest consideration as to the machinery of government which will produce the best results for all.

As to (1) and (2), have these groups considered whether the conditions of practice are such that the doctor is functioning as he ought in society as we know it? To be more specific, is it not a paradox that "surgery" occupies an inordinately important position in the economics of medical practice while "psychiatry" is in a correspondingly unimportant position? Can it not be fairly said that these questions are closely related to our problems of organization?

As to (3), there is a very great need to give attention to the question of the relationship of centralization to

decentralization in our system of government. Should it not be remembered too that there are groups of members with widely differing interests? These problems have been considered by organizations similar to our own. The Institution of Engineers appear to have done very well in perfecting their organization and have overcome difficulties of time and space (as one might expect).

Like the engineers, do not doctors require in their organization provision for the periodical meeting of members in Australia in general meeting—a medical parliament? Such a practice would be in keeping with the system of which the majority approve in everyday life; and will not its achievement prevent repetition of past mistakes?

Yours, etc.,

E. S. MEYERS.

Wickham Terrace,  
Brisbane,  
February 7, 1939.

### THE WRITING OF PRESCRIPTIONS.

SIR: In *The Journal of the American Medical Association* for September 17, 1938, under the heading "Queries and Minor Notes", there appears an answer to a correspondent that I feel deserves the attention of readers of your journal.

The correspondent in question was inquiring about the merits of the single dose method of writing prescriptions. The reply, *inter alia*, states:

Writing for single doses in prescriptions, whether for liquid or solid medication form, is decidedly objectionable if for no other reason than that the necessary multiplication must be carried out by the pharmacist, who might have no one to check him in case he makes a mistake. If the patient dies in consequence of a mistake, the misfortune is just as great whether it is the doctor's or the druggist's fault, and it is less likely to happen if both bear the responsibilities as they should.

The reply concludes with the rather ironic statement that "medical teachers sometimes call the single dose method of prescribing the 'lazy doctor's document'". It is quite obvious that the writer prefers the total dose method of prescribing.

While expressing no opinion on the subject, I was wondering what our teachers think of this reply. In Australia the single dose method of prescribing appears to be much more generally used than the total dose method.

Has there ever been any official pronouncement on this subject by the Federal Council of the British Medical Association or by the Pharmaceutical Association of Australia and New Zealand?

Yours, etc.,

D. W. JOHNSON,  
Medical Officer.

Laboratory of Microbiology and Pathology,  
William Street,  
Brisbane.

February 13, 1939.

### A SUGGESTION.

SIR: I should be glad if you can find space for the following suggestion.

In order to give more direct expression to the wishes of medical practitioners, to achieve greater unity and to put more life into local associations, it is contemplated calling (if the necessary nineteen supporters be obtained) an extraordinary general meeting of the New South Wales Branch for the purpose of passing a resolution amending the constitution along the following lines. Either (1) that recommendation of the meetings of delegates shall be binding upon the Council, such delegates having been instructed in their vote by a representative meeting of



the local association previously given opportunity to discuss the measures proposed. Or (2) that election to the State Council shall be by local associations.

Objections to the above, as well as helpful criticism and offer of support, will be welcome.

Yours, etc.,

North Bondi,  
New South Wales,  
February 15, 1939.

CRAWFORD MCKELLAR.

#### REMOVAL OF DUTY ON FELTON'S SERUM.

SIR: The attached letter from the Comptroller-General of Customs in reference to removal of duty on Felton's serum is of importance to all medical practitioners concerned with the treatment of pneumonia. May I ask that it be reproduced in full in an early issue of the journal for information?

Yours, etc.,

A. W. HOLMES & COURT.

British Medical Association House,  
135, Macquarie Street,  
Sydney.  
February 15, 1939.

Department of Trade and Customs,  
Canberra, A.C.T.,  
February 6, 1939.

Dear Dr. Holmes & Court,

In view of your expressed interest in the matter of the Tariff classification of Antipneumococcus Serum Felton, I desire to inform you that the Honourable, the Minister for Trade and Customs has decided that Antipneumococcus Serum Felton be classified under Tariff By-law Item 284(A) free. Exempt primage (British Preferential Tariff) free plus 10% primage duty (General Tariff). This decision will operate on and from the 28th January, 1939.

Yours faithfully,

E. ABBOTT,

Comptroller-General.

### Post-Graduate Work.

#### WEEK-END COURSE IN ELECTROCARDIOGRAPHY.

THE New South Wales Post-Graduate Committee in Medicine announces that a course of instruction in electrocardiography will be held at the Prince Henry Hospital, Little Bay, during the week-end June 10 and 11, 1939. The course will be elementary and is particularly designed for those in general practice. It will not be held unless eight applications are received. The programme is as follows:

##### Saturday, June 10.

- 2 p.m.—(1) "Principles of the Electrocardiograph."  
(2) "The Modern Cardiograph."  
(3) "The Normal Cardiogram."
- 3 p.m.—"The Arrhythmias", Part I.
- 4 p.m.—Afternoon tea.
- 4.15 p.m.—"The Arrhythmias", Part II.

##### Sunday, June 11.

- 10 a.m.—"The Cardiogram in Coronary Disease."
- 10.45 a.m.—Morning tea.
- 11 a.m.—"The Cardiogram in Rheumatic, Thyroid and Syphilitic Heart Disease and in the Acute Fevers."
- 11.30 a.m.—General discussion on the clinical value of the electrocardiogram.

The lecturers will be Dr. S. A. Smith, Dr. A. J. Hood Stobo, Dr. J. Halliday and Dr. R. Jeremy.

The fee for the course will be £1 1s. Applications for registration, which must be accompanied by a remittance for the amount of the fee, must be made to the Secretary, New South Wales Post-Graduate Committee in Medicine, the Prince Henry Hospital, Little Bay.

### Proceedings of the Australian Medical Boards.

#### QUEENSLAND.

THE undermentioned have been registered, pursuant to the provisions of *The Medical Acts, 1925 to 1935*, of Queensland, as duly qualified medical practitioners:

- Ryan, Brian Patrick Kennedy, M.B., B.S., 1938 (Univ. Melbourne), Brisbane.
- Saunders, Mary Aletta, L.R.C.P., 1931 (London), Wondai.
- Wark, Colin Campbell, M.B., B.S., 1938 (Univ. Melbourne), Brisbane.
- Watson, Donald, M.B., B.S., 1938 (Univ. Melbourne), Brisbane.
- Redshaw, George Muir, M.B., B.S., 1927 (Univ. Sydney), D.P.H., 1936 (Univ. Sydney), Thursday Island.

#### VICTORIA.

THE undermentioned have been registered, pursuant to the provisions of the *Medical Act, 1928*, of Victoria, as duly qualified medical practitioners:

- Henderson, Margaret Mary, M.B., B.S., 1938 (Univ. Melbourne).
- Stenhouse, Barbara Graham, M.B., B.S., 1938 (Univ. Melbourne).

#### SOUTH AUSTRALIA.

THE undermentioned have been registered, pursuant to the provisions of the *Medical Practitioners Act, 1919*, of South Australia, as duly qualified medical practitioners:

- Salts, Richard John, M.B., B.S., 1935 (Univ. Melbourne), Millicent.
- Jolly, Bertram Morris, M.B., B.S., 1937 (Univ. Adelaide), Streaky Bay.
- Game, John Aylward, M.B., B.S., 1938 (Univ. Adelaide), Adelaide Hospital, Adelaide.
- Angove, Roger Clare, M.B., B.S., 1938 (Univ. Adelaide), Adelaide Hospital, Adelaide.
- Newland, Malcolm Creswell, M.B., B.S., 1938 (Univ. Adelaide), Adelaide Hospital, Adelaide.

#### TASMANIA.

THE undermentioned have been registered, pursuant to the provisions of the *Medical Act, 1918*, of Tasmania, as duly qualified medical practitioners:

- Birchall, Ida Lois, M.B., B.S., 1933 (Univ. Sydney), Launceston.
- Pearson, Ian Richman, M.B., B.S., 1938 (Univ. Melbourne), Launceston Public Hospital, Launceston.
- Lally, Desmond Francis, M.B., B.S., 1938 (Univ. Melbourne), Launceston Public Hospital, Launceston.

- Kyle, Oswald Theodore, M.B., B.S., 1938 (Univ. Melbourne), Geelong.  
 King, Alan Joseph, M.B., B.S., 1935 (Univ. Melbourne), Federal Street, Hobart.  
 Beck, Geoffrey Frederick, M.B., B.S., 1935 (Univ. Melbourne), Federal Street, Hobart.  
 Smith, Margaret Neil, M.B., B.S., 1936 (Univ. Melbourne), New Norfolk.

### Diary for the Month.

- FEB. 23.—New South Wales Branch, B.M.A.: Medical Politics Committee.  
 MAR. 1.—Western Australian Branch, B.M.A.: Council.  
 MAR. 1.—Victorian Branch, B.M.A.: Branch.  
 MAR. 2.—South Australian Branch, B.M.A.: Council.  
 MAR. 7.—New South Wales Branch, B.M.A.: Organization and Science Committee.  
 MAR. 10.—Queensland Branch, B.M.A.: Council.  
 MAR. 14.—Federal Council of B.M.A. in Australia (Melbourne).  
 MAR. 14.—New South Wales Branch, B.M.A.: Executive and Finance Committee.  
 MAR. 14.—New South Wales Branch, B.M.A.: Ethics Committee.  
 MAR. 21.—New South Wales Branch, B.M.A.: Medical Politics Committee.  
 MAR. 22.—Victorian Branch, B.M.A.: Council.  
 MAR. 24.—Queensland Branch, B.M.A.: Council.  
 MAR. 28.—New South Wales Branch, B.M.A.: Council (Quarterly).  
 MAR. 30.—South Australian Branch, B.M.A.: Branch.  
 MAR. 30.—New South Wales Branch, B.M.A.: Annual Meeting.

### Medical Appointments.

Dr. B. Wallace has been appointed Government Medical Officer at Delegate, New South Wales.

Dr. E. F. West has been appointed Honorary Clinical Assistant to the Orthopaedic Department at the Adelaide Hospital.

Dr. J. J. M. Kenny has been appointed Medical Inspector of Seamen for the purposes of the *Navigation Act*, 1912 to 1935.

The undermentioned have been appointed members of the Advisory Committee for the purposes of the *Pure Food Act*, 1908, of New South Wales: Dr. E. S. Morris (Chairman), Dr. E. L. Morgan, Dr. H. G. Wallace, Dr. J. G. Drew and Dr. H. W. T. Chenhall.

Dr. J. H. B. Henderson has been appointed Assistant Superintendent of the Mental Hospital, Toowoomba, Queensland, in pursuance of the provisions of *The Public Service Acts*, 1922 to 1924, and *The Insanity Acts*, 1884 to 1935, of Queensland.

### Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser", pages xv to xix.

- ALFRED HOSPITAL, MELBOURNE, VICTORIA: Staff Vacancies.  
 COMMONWEALTH OF AUSTRALIA, DEPARTMENT OF HEALTH, CANBERRA, A.C.T.: Medical Officer.  
 DEPARTMENT OF PUBLIC HEALTH, WESTERN AUSTRALIA: Medical Officer.  
 DEPARTMENT OF PUBLIC INSTRUCTION, MELBOURNE, VICTORIA: Medical Officer.  
 NEW SOUTH WALES MASONIC HOSPITAL, ASHFIELD, NEW SOUTH WALES: Staff Vacancies.  
 ROYAL AUSTRALIAN NAVY: Medical Officer.  
 ROYAL MELBOURNE HOSPITAL, MELBOURNE, VICTORIA: Honorary Officers.  
 SAINT VINCENT'S HOSPITAL, MELBOURNE, VICTORIA: Staff Vacancies.

### Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCHES.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 135, Macquarie Street, Sydney.	Australian Natives' Association. Ashfield and District United Friendly Societies' Dispensary. Balmuir United Friendly Societies' Dispensary. Leichhardt and Petersham United Friendly Societies' Dispensary. Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney. North Sydney Friendly Societies' Dispensary Limited. People's Prudential Assurance Company Limited. Phoenix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association, Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17.	Brisbane Associate Friendly Societies' Medical Institute. Proserpine District Hospital. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.
SOUTH AUSTRALIAN: Secretary, 173, North Terrace, Adelaide.	All Lodge appointments in South Australia. All Contract Practice Appointments in South Australia.
WESTERN AUSTRALIAN: Honorary Secretary, 205, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.

### Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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